

THE FIRST PRIZE OF A

Silver Medal and Diploma

WAS AWARDED

ELDRIDGE CHARTS AND COAST PILOT,



At the Berlin International Fishery Exhibition, 1880;

and a GOLD MEDAL and DIPLOMA



At the Massachusetts Mechanics' Fair, 1881.

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ELDRIDGE'S

COAST PILOT..

No. 1.

Eastern Section.

FROM

CHATHAM TO ST. JOHN, N. B.

COMPILED BY

GEORGE ELDRIDGE, HYDROGRAPHER.

SIGN OF THE
LITTLE ADMIRAL.



BUSINESS ESTABLISHED
1770.

BOSTON:

S. THAXTER AND SON.

PUBLISHERS OF ELDRIDGE'S CHARTS.

AGENTS FOR THE SALE OF U. S. COAST SURVEY CHARTS; IMPORTERS AND DEALERS
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Boston.*

IMPORTANT TO MARINERS.

FOR the last twenty-five years I have been engaged in making surveys for the purpose of constructing charts for seamen, and during that time have found great uncertainty attending the use of the Compass both on sea and land. I have no doubt, therefore, from the above, that many of the shipwrecks that are constantly occurring are in consequence of its not being known that the Compass was deranged from the effects of the local attraction of iron or other magnetic substances accidentally placed within the reach of its influence on the needle on board the vessel. These unsuspected causes may also exist, and powerfully attract the Compass, in the iron used in the construction of the vessel; also in cargoes such as iron, coal, &c.

No class of men appear more ignorant of the uncertainties of the Magnetic Needle from various causes than the Mariner. The most of them make no effort to test their Compasses in fine weather, and are therefore helpless in ascertaining what course they are steering in thick or bad weather.

The Liquid Compass, though a superior instrument in many respects (especially in its traversing quickly in smooth water, and not oscillating in rough water), is no protection, as many suppose, from the evils arising from local attraction.

From the above the intelligent Mariner, by inspecting the

Pilot, will readily perceive that an error in the course may lead to difficulty. In order to insure confidence and safety in sailing at night, or in thick weather, into Harbors, Rivers, Bays, and also through Sounds, Reaches, and Thoroughfares, his Compass should be tested often.

In a work of this kind absolute accuracy is nearly impossible. Mariners are therefore earnestly requested to note all errors or omissions which they may discover, and forward the same to the author.

GEORGE ELDRIDGE,

Hydrographer.

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GEORGE'S SHOALS.

These shoals, which lie upon the Northwestern part of George's Bank, extend nearly **N.** by **W.** $\frac{1}{2}$ **W.**, and **S.** by **E.** $\frac{1}{2}$ **E.**, 17 miles. In 1856 the least depth of water upon them was 12 feet; this depth lies in Latitude $41^{\circ} 39' \frac{1}{2}$ **N.**, and Longitude $67^{\circ} 42' \frac{1}{2}$ **W.** The currents set strong across these shoals, and the depth of water upon them, undoubtedly, like those in the vicinity of Nantucket, varies with every heavy gale. By inspecting Eldridge's Chart, No. 2, from Cape Henry to Cape Sable, a better idea can be obtained of George's Bank and Shoals, than by any written description. Heavy draught vessels should beware of George's Shoals.

Bearings and Distances from 12-foot Shoal on George's Bank.

	Distance.
New South Shoal Lightship, W. by S. $\frac{1}{4}$ S. . . .	105 miles.
Chatham Lighthouses, W. by N. $\frac{1}{8}$ N. . . .	99 "
Cape Cod (Highland) Lighthouse, NW. by W. $\frac{7}{8}$ W. . . .	106 "
Thatchers I-land Lighthouses. Cape Ann, NW. $\frac{3}{4}$ W. . . .	189 "
Cape Elizabeth Lighthouses, NW. by N. $\frac{1}{4}$ N. . . .	156 "
Seguin Lighthouse, N.W.	151 "
Monhegan Island Lighthouse, N. by W. $\frac{1}{2}$ W. . . .	144 "
Mt. Desert Rock Lighthouse, N. $\frac{1}{2}$ E.	138 "
Cape Sable Lighthouse, NE. by E.	139 "

Turning of the Current in South Channel, between George's Bank and Nantucket Shoals.

In this channel between George's Bank and Nantucket Shoals, in from 30 to 40 fathoms water, the current commences to run Northerly about the time of low water in Boston, and Southerly nearly the same time it is high water at that place. 15 miles to the Eastward of George's Shoals the current was found to turn about 45 minutes sooner than in the South Channel. The current, in changing, always goes round with the sun, and is seldom still.

CULTIVATOR SHOAL.

About 20 miles to the Westward of George's Shoals, near the Western edge of the Bank, are several spots having from 7 fathoms to 17 feet water upon them; this last named danger, which lies in Latitude $41^{\circ} 37' \frac{1}{2}$ N. and Longitude $68^{\circ} 13'$ W. is called Cultivator Shoal, so named from the ship Cultivator, which struck upon it when drawing twenty-two ft. water.

Bearings and Distances from Cultivator Shoal.

	Distance.
New South Shoal Light Ship, W. by S. $\frac{3}{8}$ S. . . .	86 miles.
Chatham Lighthouses, W. by N. $\frac{1}{4}$ N.	80 "
Cape Cod (Highland) Lighthouse, NW. by W. $\frac{1}{2}$ W. . . .	87 "
Cape Ann (Thatchers Island) Lighthouses, NW. $\frac{1}{4}$ W. . . .	123 "
Cape Elizabeth Lighthouses, NW. by N. $\frac{3}{4}$ N.	146 "
Monhegan Island Lighthouse, N. $\frac{3}{8}$ W.	137 "


Cashe's Ledge.

The shoalest part of this Ledge, which has 24 feet water upon it, is a white flat Rock, about one hundred yards in diameter, and known as Ammen's Rock. About 4 miles to the Southwest of Ammen's Rock is another with 80 feet water upon it; heavy draught vessels should give this Ledge a wide berth.

Bearings and Distances from Ammen's Rock.

	Distance.
Cape Cod (Highland) Lighthouse, SW. by W. $\frac{1}{4}$ W. . . .	76 miles.
Boston Lighthouse, W. $\frac{3}{4}$ S.	97 "
Cape Ann, (Thatchers Island) Lighthouses, West.	78 "
Cape Elizabeth Lighthouses, NW. $\frac{1}{4}$ N.	69 "
Monhegan Island Lighthouse, N. $\frac{1}{2}$ W.	54 "

The Latitude of Ammen's Rock is $42^{\circ} 55'$ N., and Longitude $68^{\circ} 53'$ W.

 The Bearings in this Book are by Compass, and Distance in Nautical Miles.

ELDRIDGE'S COAST PILOT.

From Pollock Rip to Highland Light.

Chatham Lights.

These two Lighthouses, which show fixed White Lights, are located upon the mainland called James' Head; they are 100 feet apart, ranging North and South, and bear about North from Pollock Rip Light-ship; distance $8\frac{1}{2}$ miles.

Nauset Lights.

These three Lighthouses, which show fixed White Lights, are located upon the Eastern part of Cape Cod, and bear N. by E. 11 miles from Chatham Lights; they are 150 feet apart, and range North and South.

Cape Cod Highland Light.

This Lighthouse, which shows a fixed White Light, is located upon the Eastern part of Cape Cod, and bears N. by W. from Nauset Three Lights, distance 12 miles. A Fog Trumpet is placed near the Lighthouse, giving blasts of 8 seconds at intervals of 30 seconds.

Bearings and Distances from Cape Cod Highland Light.

Boston Lighthouse, NW. $\frac{3}{4}$ W.	distance 41 miles.
Baker's Island Lighthouses, NW. $\frac{3}{4}$ N.	" 43 $\frac{3}{4}$ "
Eastern Point Lighthouse, entrance to Gloucester Harbor, NW. by N. $\frac{1}{2}$ N.,	distance 42 miles.
Thatcher's Island Lighthouses, N. by W. $\frac{3}{4}$ W.	" 42 $\frac{1}{2}$ "
Boon Island Lighthouse, N. $\frac{1}{4}$ W.	" 67 $\frac{1}{2}$ "
Cape Elizabeth Lighthouses, N. $\frac{3}{4}$ E.	" 92 "
Seguin Lighthouse, N. by E. $\frac{3}{4}$ E.	" 101 "
Manhegan Lighthouse, NE. by N. $\frac{1}{4}$ N.	" 103 "
Mt. Desert Rock Lighthouse, NE. $\frac{1}{2}$ E.	" 143 "
Cape Sable Lighthouse, E. $\frac{5}{8}$ N.	" 212 "

Dangers.***New Harbor Bars.***

In April, 1851, an inlet was opened by the furious storm waves through Nauset Beach about $1\frac{1}{2}$ miles Northeasterly from Chatham Lighthouses. The current of Ebb, by its great strength and velocity, has carried seaward into deep water large quantities of sand, forming the dangerous shoals called Chatham New Harbor Bars, which lie in the direct track of vessels, especially with off-shore winds, bound east or west by way of Vineyard Sound. For several years a Nun Buoy has been placed off these Bars, but at night-time, with a smooth sea, there are neither marks nor bearings to warn the mariner of his approach to these dangerous shoals, and he is liable to mistake the main land for the beach, the latter being very deceptive on account of its being elevated but little above the water. From the best authority that can be obtained at the present time, 1879, there have been ashore upon these Bars, since their formation, including steamers and all other classes, 246 vessels; of this number, from 50 to 100 have been total losses. The above facts, together with my personal experience and observations, show these Bars to be the most dangerous spot on the coast of the United States. Vessels passing Chatham in thick weather or night-time, bound to the northward, should, therefore, when the lights bear **W.NW.**, make use of the lead, and not approach these Bars in less than 7 or 8 fathoms water. The above is reversed, bound to the southward.

The furious storm waves have also been gradually wearing away the beach to the southeastward of Chatham Lights, leaving dangerous Sand Bars which now extend a long distance from shore. Vessels, therefore, passing Chatham should, especially at night-time, give these dangerous Bars a wide berth. Since the above was written, a Whistling Buoy has been placed off these Bars in about 7 fathoms water.

Bearings and Distances from this Buoy.

Chatham Lighthouses, W.	$\frac{3}{4}$ S. ,	distance, $2\frac{1}{4}$ miles.
Pollock Rip Light-ship, S. by W.	$\frac{1}{4}$ W. ,	" $9\frac{1}{4}$ "
Monomoy Lighthouse, SW.	$\frac{3}{4}$ S. ,	" $8\frac{1}{2}$ "

Between New Harbor Bars and Cape Cod Highland Light there are Sand Bars which extend off some distance from shore. To

avoid these dangers, vessels of 12 feet draught should not approach the land nearer than three quarters of a mile.

**Sailing Directions from Pollock Rip to Cape Cod
Highland Light in Daytime, with favorable winds
and fair weather.**

The Buoy off New Harbor Bars bears **N. by E. $\frac{1}{4}$ E.** from Pollock Light Ship; distance $9\frac{1}{2}$ miles. Vessels leaving Broken Part of Pollock Rip, in either channel, should make good the course **N.NE.** until abreast of the Buoy off these bars, then follow the shore, keeping at least three quarters of a mile from it to Highland Light.

**Sailing Directions from Pollock Rip to Cape Cod
Highland Light at Night-time, with favorable
winds and fair weather.**

From Broken Part of Pollock Rip make good the course **NE.** by **N. $\frac{1}{2}$ N.** 11 miles, or until Nauset (three) Lights bear **N. by W. $\frac{1}{2}$ W.**, then steer **N. $\frac{1}{4}$ W.**; in running this last course, Nauset Lights and Cape Cod Light will be left from 2 to 3 miles to the westward.

**Sailing Directions from Pollock Rip to Cape Cod
Highland Light in thick weather.**

In order to avoid New Harbor Bars, vessels leaving the Broken Part of Pollock Rip in thick weather, in either of the channels, especially on the first of the Western Tide, with light winds, should make good the course **NE.** by **N. $10\frac{1}{2}$ miles**, or until the water deepens to 20 fathoms: Chatham Lights will then bear **W. $\frac{1}{2}$ S.**; distance $5\frac{3}{4}$ miles; Nauset Lights **N. by W. $\frac{1}{2}$ W.** 11 miles

By running **N. $\frac{1}{4}$ W.** from this

Dangers.***New Harbor Bars.***

In April, 1851, an inlet was opened by the furious storm waves through Nauset Beach about $1\frac{1}{2}$ miles Northeasterly from Chatham Lighthouses. The current of Ebb, by its great strength and velocity, has carried seaward into deep water large quantities of sand, forming the dangerous shoals called Chatham New Harbor Bars, which lie in the direct track of vessels, especially with off-shore winds, bound east or west by way of Vineyard Sound. For several years a Nun Buoy has been placed off these Bars, but at night-time, with a smooth sea, there are neither marks nor bearings to warn the mariner of his approach to these dangerous shoals, and he is liable to mistake the main land for the beach, the latter being very deceptive on account of its being elevated but little above the water. From the best authority that can be obtained at the present time, 1879, there have been ashore upon these Bars, since their formation, including steamers and all other classes, 246 vessels; of this number, from 50 to 100 have been total losses. The above facts, together with my personal experience and observations, show these Bars to be the most dangerous spot on the coast of the United States. Vessels passing Chatham in thick weather or night-time, bound to the northward, should, therefore, when the lights bear **W.N.W.**, make use of the lead, and not approach these Bars in less than 7 or 8 fathoms water. The above is reversed, bound to the southward.

The furious storm waves have also been gradually wearing away the beach to the southeastward of Chatham Lights, leaving dangerous Sand Bars which now extend a long distance from shore. Vessels, therefore, passing Chatham should, especially at night-time, give these dangerous Bars a wide berth. Since the above was written, a buoy has been placed off these Bars in about 7

ELDRIDGE'S COAST PILOT, No. 1,
PAGE 8.

Chatham, May 5, 1883.

By order of the Lighthouse Board, the Whistling Buoy, off New Harbor Bars, has been moved to a point about $3\frac{1}{4}$ miles **N. E.** $\frac{1}{2}$ **N.** from Pollock Rip Light Ship.

The outer part of New Harbor Bars, bears from this Buoy North 6 miles.

The Currents set about **N. E.** by **N.** and **S. W.** by **S.**

avoid these dangers, vessels of 12 feet draught should not approach the land nearer than three quarters of a mile.

**Sailing Directions from Pollock Rip to Cape Cod
Highland Light in Daytime, with favorable winds
and fair weather.**

The Buoy off New Harbor Bars bears **N. by E. $\frac{1}{4}$ E.** from Pollock Light Ship; distance $9\frac{1}{2}$ miles. Vessels leaving Broken Part of Pollock Rip, in either channel, should make good the course **N.NE.** until abreast of the Buoy off these bars, then follow the shore, keeping at least three quarters of a mile from it to Highland Light.

**Sailing Directions from Pollock Rip to Cape Cod
Highland Light at Night-time, with favorable
winds and fair weather.**

From Broken Part of Pollock Rip make good the course **NE.** by **N. $\frac{1}{2}$ N.** 11 miles, or until Nauset (three) Lights bear **N. by W. $\frac{1}{2}$ W.**, then steer **N. $\frac{1}{4}$ W.**; in running this last course, Nauset Lights and Cape Cod Light will be left from 2 to 3 miles to the westward.

**Sailing Directions from Pollock Rip to Cape Cod
Highland Light in thick weather.**

In order to avoid New Harbor Bars, vessels leaving the Broken Part of Pollock Rip in thick weather, in either of the channels, especially on the first of the Western Tide, with light winds, should make good the course **NE.** by **N.** $10\frac{1}{2}$ miles, or until the water deepens to 20 fathoms: Chatham Lights will then bear **W. $\frac{1}{2}$ S.**; distance $5\frac{3}{4}$ miles; Nauset Lights **N. by W. $\frac{1}{2}$ W.** 11 miles.

By running **N. $\frac{1}{4}$ W.** from this last point, Nauset and Highland Lights will be left about $2\frac{1}{2}$ miles to the westward.

Beating around Cape Cod.

Vessels beating to windward bound to the northward, or around Cape Cod, when abreast of Chatham Lights, should keep in shore, as the current sets to the southward quite strong, most of the time off shore, during northerly winds.

Advice to Vessels in thick weather bound from Cape Cod to Boston, Salem, or Cape Ann.

To the Eastward of the Cape the Tide or Current turns much sooner in shore than it does off shore. In 40 fathoms water, about **NE.** 4 miles distant from Cape Cod Highland Light, the current commences to run into the Bay about the time of low water in Boston, and commences setting out about the time of high water at this place. In from 30 to 40 fathoms water off Northeast from Highland Light, the direct course to Boston Lighthouse is **NW.** by **W.** $\frac{1}{4}$ **W.**, distance about 42 miles. Vessels in thick weather leaving the Cape, bound to Boston, Salem, or Cape Ann, should make allowance for the current, which, for a considerable distance to the Northward of the Race, runs out and into Cape Cod Bay, especially at or near the full and change of the Moon, very strong.

From Highland Light to Provincetown or Cape Cod Harbor.

Highland Light.

This Lighthouse, which shows a fixed White Light, is located upon the Eastern part of Cape Cod. Race Point Lighthouse bears from it **W.NW.**, distance $8\frac{1}{2}$ miles. At this date, 1879, a Fog Trumpet is placed near the Lighthouse, giving blasts of 8 seconds at intervals of 30 seconds.

Race Point Lighthouse.

This Lighthouse, which shows a fixed White Light, varied by white flashes, is located upon the extreme Northwesterly part of Cape Cod; Wood End Light bears from it **SE.** by **S.**, distance $8\frac{1}{2}$ miles. At this date, 1879, a Steam Whistle is placed near the Lighthouse, giving blasts of 4 seconds, with alternate intervals of 8 and 44 seconds.

Wood End Lighthouse.

This Lighthouse, which shows a flashing Red Light, is located upon Wood End Beach. Long Point Light bears from it **NE.** by **E.** $\frac{1}{2}$ **E.**; distance $1\frac{1}{4}$ miles.

Long Point Lighthouse.

This Lighthouse, which shows a fixed White Light, is located on the **SW.** side of entrance to Provincetown Harbor. Cape Cod

Highland Light bears from it E. $\frac{1}{2}$ S. ; distance about 5 miles. A Bell struck by machinery is placed near the Lighthouse.

Dangers in Sailing from Cape Cod Highland Light to Provincetown Harbor.

Shoal Spots.

From $1\frac{1}{2}$ to 3 miles to the Northwestward of Cape Cod Light there are several Shoal Spots, some of which have as little as 12 feet water upon them at very low tides. These dangers lie about a half mile from land, with a narrow channel of from 3 to 5 fathoms water between them and the shore.

Peaked Hill Bars.

These dangerous Shoals lie from 4 to $7\frac{1}{2}$ miles Northwesterly from Cape Cod Highland Light, and extend from $\frac{1}{2}$ to $\frac{3}{4}$ mile from shore. In order to avoid these dangers when sailing between Cape Cod Light and Race Point, vessels of 12 feet draught or upwards should not, especially at low tide, approach the shore in less than 10 fathoms water.

Shoal Spots.

Northwesterly from Peaked Hill Bars there are several Shoal Spots with narrow channels of from 3 to 5 fathoms within them ; the most dangerous one lies about $\frac{3}{4}$ mile from shore, and has as little as 8 feet water upon it at very low tides. Race Point Light * bears from this last-mentioned danger SW. by W. $\frac{1}{2}$ W. ; distance $2\frac{1}{2}$ miles. 20 fathoms water was found about North one-tenth of a mile from this shoal ; the lead, therefore, gives but little warning in approaching it from the Northward.

Shank Painter Bar.

This Bar, upon which there are fifteen feet of water at Low Tide, lies about half-way from Race Point to Wood End Light, and extends about $\frac{1}{2}$ mile from shore. 24 fathoms water was found 150 yards to the westward of this shoal ; the lead, therefore, gives but little warning in approaching this danger.

* From Cape Cod Highland Light, bound to the Northwestward, Race Point Light cannot be seen from the deck of a vessel until it bears SW. $\frac{1}{4}$ W.

Herring Cove Anchorage.

If it blows so hard from the Eastward that you cannot beat into Provincetown Harbor, you may find shelter, with winds from **E.** by **S.** to **NE.** by **N.**, about 1 mile Southeasterly from Race Point Light, in what is called Herring Cove. The best anchorage for large vessels is about $\frac{1}{4}$ mile from shore in from 4 to 5 fathoms water; at low tide small vessels should anchor in from 3 to 4 fathoms water. A strict watch should be kept while lying here, and the Cove should be left on the first indication of a westerly wind.

Sailing Directions from Cape Cod Highland Light to Provincetown, or Cape Cod Harbor, in Day-time.

When abreast of Cape Cod Highland Light, follow the shore to the Northwestward, keeping at least a mile from it in order to avoid Peaked Hill Bars. When Race Point Light bears **SW.**, then run in **W.SW.**; give this Point or Lighthouse a berth of from $\frac{1}{2}$ to $\frac{3}{4}$ of a mile, leaving it to the Eastward, and follow the shore to the Southeastward, keeping about $\frac{3}{4}$ of a mile from it; haul round Wood End and Long Point Lights at a distance of $\frac{1}{2}$ mile. * Leaving them on the port hand, run into the harbor, and anchor in from 3 to 10 fathoms water.

Sailing Directions from Cape Cod Light to Provincetown Harbor at Night, with fair weather.

When Cape Cod Light bears **SW.**, from 1 to 2 miles distant, make good the course **NW.** $\frac{1}{2}$ **W.** about 8 miles, or until Race Point Light bears **SW.**, then run in **W.SW.** Leave this last-mentioned light about $\frac{3}{4}$ of a mile to the Eastward, and run **SE.** by **S.** $\frac{1}{2}$ **S.** until Wood End and Long Point Lights are in range bearing **NE.** by **E.** $\frac{1}{2}$ **E.**; the course is then **E.** by **S.** until Long Point Light† bears **N.NE.**, then run **NE.** and haul round Long Point Light at a distance of $\frac{1}{2}$ mile. Leaving it on the port hand, run in **NW.** by **W.**, and anchor in from 5 to 10 fathoms water.

* A Black Buoy has been placed off the Southeast end of Long Point Shoal. In entering Provincetown Harbor this Buoy is left on the Port hand.

† Vessels of 12 feet draught or upwards, bound into Provincetown Harbor, should not approach Long Point Lighthouse, especially at low tide, nearer than half a mile, until it bears west.

Thick Weather.

At this date, 1879, there is a Fog Trumpet at Cape Cod Light, a Steam Whistle at Race Point Light, and a Fog Bell at Long Point Light; the ear, assisted by the compass and lead, will therefore be the best pilot for vessels sailing in thick weather from Cape Cod Light to Provincetown Harbor.

Beating from Race Point to Wood End Light, bound into Provincetown Harbor.

With Southerly or Southeasterly winds, vessels of 12 ft. draught or upwards, beating from Race Point to Wood End Light, should not approach nearer the shore than $\frac{3}{4}$ of a mile, as it is very bold (especially after passing Herring Cove), and they will have 20 fathoms water at one cast of the lead, and be ashore at the next, before they can tack.

Beating from Wood End Light into Provincetown Harbor, with Northerly or Northeasterly Winds.

Vessels beating from Wood End Light bound into Provincetown Harbor, should keep the Eastern Shore aboard. Large vessels may boldly approach this shore in 6 fathoms water, at night or day.

Anchorage under the Eastern Shore.

If it blows so hard from the NE. that you cannot beat into Provincetown Harbor, when abreast of Wood End Light, stand on close-hauled until the water shoals to 10 fathoms upon the Eastern Shore, then anchor. If the wind should back to the NW. and blow heavy, shelter may be found under Billingsgate Shoal. See *Directions for Wellfleet Harbor.*

Best Anchorage in Provincetown Harbor.

The Eastern part of this harbor is somewhat exposed to heavy southerly gales. In order, therefore, to find good shelter from all winds, vessels should anchor in from 8 to 10 fathoms water at low tide, — Long Point Light bearing from SE. to E. by S.; distance about $\frac{1}{3}$ mile. In anchoring be careful to avoid the Western Shore opposite Long Point Light, as it is very bold, and you will have from 8 to 10 fathoms water within a stone's throw of the Flats.

High Water at Provincetown Harbor.

It is high water at this place 10 minutes before it is at Boston.
Mean Rise and Fall of Tides about $9\frac{1}{4}$ feet.

Advice to Masters of Vessels in regard to Leaving the Race Light with strong Indications of a heavy Northeast Gale, accompanied with Snow.

If a vessel be off Cape Cod Light bound to Boston, with Easterly or Northeasterly winds, and strong indications of a heavy gale accompanied with snow, my advice is, to keep, if possible, the bearings of Race Point Light until it commences snowing; then, by the following directions, run into Cape Cod Bay. When Race Point Light (which, at this date, 1879, has a Steam Whistle* near it) bears **E.NE.** from 1 to 2 miles distant, haul up **SE.** by **S. $\frac{1}{2}$ S.** and run four miles on this course, or until Wood End Light bears **NE.** If the wind blows so hard or it snows so thick that she cannot get into Provincetown Harbor, stand on close-hauled until the water shoals to 10 or 15 fathoms, then anchor; if she drags, cut away the spars until the anchors hold her.

I consider this anchorage in Cape Cod Bay, during a heavy Northeasterly gale, safer than the open roadstead of Vineyard Haven.

Wellfleet Harbor.***Billingsgate* Light.***

This Lighthouse, which shows a fixed White Light, is located upon the Southeastern part of Billingsgate Island. In sailing into Wellfleet Harbor, this Light is left to the Westward.

Bearings and Distances.

Billingsgate Light bears from Race Point Light **S.SE.**; distance 14 miles.

From Wood End Light, **S.** by **E. $\frac{3}{4}$ E.**; distance $10\frac{1}{2}$ miles.

From Sandy Neck Light, Barnstable Harbor, **NE.** by **E. $\frac{1}{2}$ E.**; distance 18 miles.

* At this date, 1879, a powerful Steam Whistle is placed near the Race Light, giving blasts of 4 seconds with alternate intervals of 8 and 44 seconds. This whistle should in thick weather be heard at least 4 miles.

Mayo's Beach Light.

This Lighthouse, which shows a fixed White Light, is located at the head of Wellfleet Bay, upon Mayo's Beach, and bears from Billingsgate Light **NE. by N.**; distance 4 miles.

Dangers entering Wellfleet Harbor.*Billingsgate Shoal.*

This Shoal extends off a long distance Southwesterly from Billingsgate Light. A Black Buoy (No. 1), placed in about two fathoms water at low tide, marks its outer part. This Buoy bears from Billingsgate Light **W. by S. $\frac{1}{2}$ S.**; distance $4\frac{1}{3}$ miles: from Race Point Light **S. $\frac{1}{4}$ E.**; distance $14\frac{1}{2}$ miles: from Wood End Light **S. $\frac{1}{2}$ W.**; distance $11\frac{1}{2}$ miles. Vessels of not more than 7 feet draught may at low tide pass across this shoal from 1 to $1\frac{1}{2}$ miles within the buoy; and vessels of not more than 10 or 11 feet draught may, after half flood, pass from 1 to 2 miles within it; but vessels of 9 feet draught or upwards, unacquainted, should not at low tide pass within it.

Bibb Rock.

This Rock, which is marked with a Buoy having Red and Black horizontal stripes, bears from Billingsgate Light **S.**; distance $2\frac{1}{2}$ miles. At very low tides there are about 4 feet water upon this rock.

Other Dangers.

There are quite a number of Rocks (which, at this date, 1879, are not buoyed) at the entrance of Wellfleet Bay, some of which have but little water upon them at low tide. There are also extensive Flats on both sides of the Bay, and the place may at low tide be called a shoal-water harbor.

Sailing Directions for Wellfleet Bay and Harbor in Day-time, with favorable winds and fair weather.

Vessels from the Northward, of from 9 to 11 feet draught, may bring Race Point Light to bear **N. $\frac{1}{4}$ W.**, distance 3 miles, and make good the course **S. $\frac{1}{4}$ E.** $11\frac{1}{2}$ miles to Black Buoy No. 1, which lies on the Southwest part of Billingsgate Shoal; leave this Buoy a short distance to the Northward, and make good the course **E. by S.** until Billingsgate Light bears **N. by E.**, then steer **NE**

by **E.** In running this last course you will see a Black Buoy, No. 3, which bears from the light **S.SE.** $1\frac{1}{4}$ miles. Leave this last-mentioned Buoy a short distance to the Westward, and run about **N.** by **W.** for the Red Buoy on Middle Ground. If it be low tide when the Lighthouse bears **NW.**, it is advisable to anchor, and if bound up to town wait until about $\frac{3}{4}$ flood. From this anchorage run for Red Buoy No. 2, on Middle Ground,* bearing about **N.** by **W.**, leaving it a short distance to the Eastward, and make good the course **NE.** $1\frac{1}{3}$ miles to Black Buoy No. 5. off Smalley's Bar. From this last-mentioned Buoy (which is left to the Westward) steer directly for the Lighthouse on Mayo's Beach, bearing **N.NE.**; distance $2\frac{1}{4}$ miles. When about $\frac{1}{4}$ mile from the lighthouse, steer more Easterly, and enter the harbor.

Beating up to Wellfleet Harbor.

Strangers should not attempt to beat up to Wellfleet Harbor without a Pilot, as there are many sunken Rocks in the Bay which are not buoyed at this date.

High Water.

It is High Water in Wellfleet Bay 30 minutes before it is at Boston. Common tides rise about $11\frac{1}{4}$ feet.

Anchorage during heavy Northerly Winds under Billingsgate Shoal.

If it blows so hard from the Northward that you cannot beat into Provincetown Harbor, a lee may be found under Billingsgate Shoal by the following directions: Bring Wood End Light to bear **N. $\frac{1}{2}$ E.**, on which bearing keep it and steer **S. $\frac{1}{2}$ W.** In running this course, if you strike in less than 5 fathoms water before Billingsgate Light bears **E.NE.**, haul to the Westward, and do not come nearer the shoal than this last-mentioned depth until the light bears **E.NE.**, then make good the course **E.** by **N.**, and when the water shoals to 4 or 5 fathoms at low tide, anchor, Billingsgate Light bearing about **NE. $\frac{1}{2}$ E.**; distance $2\frac{1}{2}$ miles. Small vessels of 8 or 9 feet draught may run **E.** by **N.** until the water shoals to $2\frac{1}{2}$ fathoms at low tide, and anchor with the light

* Vessels running from Black Buoy No. 1 to Red Buoy No. 3, should keep the latter bearing about **N.** by **W.** in order to avoid Channel and Lobster Rocks, which, on this course, will both be left to the Eastward.

bearing **N. by W.**; distance $1\frac{1}{2}$ miles. With winds from **N.N.W.** to **SW.** by way of **E.**, there is good anchorage in 4 fathoms water, about three and a half miles South from Billingsgate Light. The Red and Black horizontal Striped Buoy on Bibb Rock bears North from this anchorage; distance $\frac{3}{4}$ of a mile.

Rock Harbor.

The entrance to this Creek or Harbor, which is *dry at low tide*, bears **S. by E** $\frac{1}{2}$ **E.** from Billingsgate Light; distance 5 miles.

Sailing Directions for Rock Harbor.

Vessels from the Northward may bring Race Point Light to bear **N. $\frac{1}{4}$ W.**, distance 3 miles, and make good the course **S. $\frac{1}{4}$ E.** $11\frac{1}{8}$ miles to Black Buoy, off Southwest part of Billingsgate Shoal. Leave this buoy a short distance to the Northward, and make good the course **SE. by E.** $\frac{1}{2}$ **E.** until the water shoals to $2\frac{1}{2}$ or 3 fathoms at low tide; then anchor and wait for a pilot. Billingsgate Light bears from this anchorage **N. $\frac{1}{4}$ W.**; distance about 4 miles.

High Water.

It is High Water at Rock Harbor about the same time it is in Wellfleet Bay.

Brewster Landing.

This Landing, which is *dry at low tide*, bears from Billingsgate Lighthouse about **S.W.**; distance nearly $6\frac{1}{8}$ miles.

Sailing Directions for Brewster Landing.

Vessels from the Northward may bring Race Point Light to bear **N. $\frac{1}{4}$ W.**, distance 3 miles, and steer **S. $\frac{1}{4}$ E.** $11\frac{1}{8}$ miles, until abreast of Buoy off Southwest part of Billingsgate Shoal. Leave this buoy a short distance to the Eastward and run **SE. by S.** $\frac{1}{2}$ **S.**, until the water shoals to 3 fathoms at low tide, then anchor, or lay off and on till high water.

High Water.

It is High Water at Brewster Landing about 10 minutes before it is at Boston.

Sursuit Creek, or East Dennis Landing.

The entrance to this Creek or Landing, which is *dry at low tide*, bears from Race Point Light south; distance about 19 miles. From Billingsgate Light **SW. $\frac{1}{4}$ S.**; distance 8 miles.

Sailing Directions for Sursuit Creek, or East Dennis Landing.

Vessels from the Northward may bring Race Point Light to bear North, distance 3 miles, and make good the course South to Sursuit Creek, distance 16 miles. On this course, the Black Buoy off Billingsgate Shoal will be left about 1 mile to the Eastward. Run in on this course until the water shoals to 4 fathoms at Low Tide, then anchor, or lay off and on until high water, when, in order to enter the Creek, a pilot will be necessary.

High Water.

It is High Water at this place about the same time as it is at Brewster Landing.

North Dennis Landing.

This Landing, which is dry at low tide, bears from Race Point Light **S. $\frac{1}{2}$ W.**; distance about 19 miles.

Sailing Directions for North Dennis Landing.

Vessels from the Northward may bring Race Point Light to bear **N. $\frac{1}{2}$ E.**, distance 3 miles, and make good the course **S. $\frac{1}{2}$ W.** 16 miles, to North Dennis Landing; run in until the water shoals to 4 fathoms at low tide, then anchor or lay off and on until high water.

High Water.

It is High Water at this place about 10 minutes before it is at Boston.

Barnstable Harbor.

Sandy Neck Lighthouse.

This Lighthouse, which shows a fixed White Light, is situated on Sandy Neck, West side of entrance to Barnstable Harbor.

Bearings and Distances.

Sandy Neck Light bears from Race Point Light **S. by W. $\frac{1}{2}$ W.**; distance $20\frac{1}{2}$ miles. From Wood End Light **SW. by S. $\frac{3}{4}$ S.**; distance $18\frac{1}{8}$ miles. From Billingsgate Light **SW. by W. $\frac{1}{2}$**

W.; distance 13 miles. From Gurnet Lights entrance to Plymouth Harbor, SE. by S. $\frac{1}{2}$ S.; distance $22\frac{1}{4}$ miles.

Dangers.

This harbor is difficult of access on account of a Sand Bar which extends across its entrance, and there are usually not more than 6 or 7 feet water upon it at low tide; the best water across this bar is marked with a Red Buoy, which in sailing in is left to the westward. Sandy Neck Light bears from this Buoy SW. by S. $\frac{1}{2}$ S.; distance $1\frac{1}{2}$ miles. The harbor at low tide may be called a shoal-water place.

Sailing Directions for Barnstable Harbor in Day-time, with favorable Winds and fair weather.

Vessels from the Northward of not more than 10 or 11 ft. draught may bring Race Point Light to bear N, by E. $\frac{1}{2}$ E., distance about 3 miles, and run S. by W. $\frac{1}{2}$ W. 16 miles, to Red Buoy No. 2, at the entrance of Barnstable Harbor. After making this Buoy, anchor in 4 or 5 fathoms water, or lay off and on until about $\frac{3}{4}$ flood; then run in, leaving the Red or Bar Buoy a short distance to the Westward. When abreast of this Buoy make good the course S. by W. $\frac{1}{4}$ W., for Black Buoy No. 1, which is left to the Eastward. From this last-mentioned buoy steer for the Lighthouse until within 150 yards from the beach, then follow the shore to the Westward, keeping about 150 yards from it, and anchor in about $2\frac{1}{2}$ fathoms water at low tide, the Light bearing NE.; distance 300 yards.

In running in from Black Buoy, No. 1, to Lighthouse Point, be careful to make good the course, as the flood tide sets strong to the Eastward over Yarmouth Flats.*

If bound to Yarmouth or Barnstable, it is advisable to take a Pilot at the anchorage.

Directions to enter this Harbor in heavy Northerly Winds.

At night, if a vessel of not more than 9 feet draught, with heavy Northerly winds, should be compelled to enter this harbor, it must

* Yarmouth Flats lie on the East side of the Channel, and are dry in some places at low tide.

not be attempted until about $\frac{3}{4}$ flood; then bring Sandy Neck Light to bear **SW.** by **S.** $\frac{1}{2}$ **S.** and run for it; as soon as she strikes 4 fathoms water, steer **S.** by **W.** until the Light bears **SW.** $\frac{1}{2}$ **S.**; then make good the course for it till she is $\frac{1}{2}$ mile from it; then steer a little more Southerly, keeping a sharp lookout for the Lighthouse Point,* and round it within a cable's length, and anchor with the light bearing **NE.**; distance 300 yards.

Sailing Directions for Vessels from the North-westward.

When Gurnet Lights (entrance to Plymouth Harbor) bear **W.**, distance 3 or 4 miles, make good the course **S.SE.** $20\frac{1}{4}$ miles to Red Buoy No. 2, on bar at entrance of Barnstable Harbor; as soon as this Buoy is made follow the directions before given.

High Water.

It is High Water at Barnstable Harbor 7 minutes before it is at Boston. Common tides rise about $9\frac{3}{4}$ feet.

Sandwich Harbor.

The entrance to this Harbor, in which there is but little water at low tide, bears from Race Point Light **SW.**; distance 21 miles. It is High Water at this place about the same time as at Barnstable.

Plymouth Harbor.

Gurnet Lights.

These two Lighthouses, which show fixed White Lights, are located upon Gurnet Point, north side of entrance to Plymouth Harbor; they are 31 feet apart, and range **SE.** and **NW.**

Bearings and Distances.

Gurnet Lights bear from Race Point Light **W.**; distance $16\frac{1}{2}$ miles. From Billingsgate Light **NW.** by **W.** $\frac{1}{4}$ **W.**; distance $25\frac{1}{4}$ miles. From Thatcher's Island Lights **S.** by **W.** $\frac{1}{4}$ **W.**; distance 38 miles.

* The Lighthouse stands on the West side of entrance to this Harbor, and is 350 yards from the Point.

Duxbury Pier Light.

This Lighthouse, which shows a fixed White Light, is placed in 7 feet water at Low Tide, and bears from Gurnet Lights **W.** by **S.**; distance $2\frac{1}{3}$ miles. In entering the Harbor this Light is left on the starboard hand.

Dangers in approaching Plymouth Harbor from the Northward.*Howland's Ledge.*

This Ledge, which has but 5 feet water upon it at Low Tide, is marked with a Red Buoy, No. 4, which is placed off the East side of the Rocks. Gurnet Lights bear from this Buoy **S.**; distance $4\frac{1}{2}$ miles. Vessels unacquainted should not attempt to pass between this buoy and the shore.

High Pine Ledge.

This Ledge, which has but little water upon it at very Low Tides, is marked with a Red Buoy, No. 6, which lies off its Eastern part. Gurnet Lights bear from this buoy **S. $\frac{1}{2}$ W.**; distance 2 miles.

Dangers in approaching Plymouth Harbor from the Southeastward.

Vessels approaching Plymouth Harbor from the Southeastward should, in order to avoid the Rocks off Manomet Point, bring the Gurnet Lights in range, and run for them. These last-mentioned Rocks, which are not buoyed at this date (1879), bear about **S.S.E.** from Gurnet Lights; distance about 6 miles.

Dangers in entering Plymouth Harbor.

Upon the Southern side of the Channel lies a Dangerous Shoal, dry in some places at Low Tide, called Brown's Bank, which extends off Northeasterly from Long Beach, and is marked upon its outer part with a Black Buoy, No. 1. Gurnet Lights bear from this Buoy about **N.N.W.**; distance $\frac{3}{4}$ mile. In passing in, this Buoy is left to the Southward.

Gurnet Rock.

This Rock, which is marked with a Red Buoy No. 2, bears from Gurnet Lights **SE.** by **E. $\frac{3}{4}$ E.**; distance $\frac{1}{3}$ mile. Between the

Buoy and the Lighthouses there are several Rocks having but little water upon them at Low Tide. In passing in, this Buoy is left to the Northward.

Bass Rock,

On which there are about 4 feet water at Low Tide, is marked with a Red Buoy, No. 4. This Buoy bears from Gurnet Lights **S. $\frac{1}{4}$ W.**; distance about $\frac{1}{3}$ mile. In passing in, this Buoy is left to the Northward.

Sailing Directions for Plymouth Harbor in Day-time, with favorable winds and fair weather.

Vessels from the Northward may run for Plymouth Lights, bearing from **S. by W. to S.SW.**; * haul round the Lighthouse Point at a distance of $\frac{1}{2}$ mile, leaving the Red Buoys upon Gurnet and Bass Rocks a short distance to the Northward. When abreast of this last-mentioned Buoy, which bears **S. $\frac{1}{4}$ W.** from the Lighthouses, make good the course **W. $\frac{3}{4}$ S.**, leaving the Red Buoys to the Northward, and the Black Buoys off Brown's Bank to the Southward. When about midway between Duxbury Pier Lighthouse and a Black Buoy which bears from the Light about **SW.** by **S. $\frac{1}{2}$ S.**, distant $\frac{1}{2}$ mile, make good the course **N.NW.**, leaving the Lighthouse about one cable's length to the Eastward. When abreast of it you will see a Black Buoy bearing from it **NW. $\frac{1}{4}$ N.**, distance $\frac{1}{4}$ mile. Leave this Buoy a short distance on the Port hand, and anchor about 200 yards from it, bearing **S.SW.**, in from 3 to 5 fathoms water at low tide. This anchorage is called the Cow Yard, and is well sheltered in Easterly Gales.

Large vessels may anchor in from 5 to 7 fathoms water at Low Tide, the Light bearing from **SE.** by **E. to E.SE.**; distance 300 to 400 yards from it.

Vessels from the Eastward, or around Cape Cod, may bring Race Point Light to bear **E.**, and make good the course **W.** As soon as the Gurnet Lights are made bring them to bear from **W. to W. NW.**, and run for them until the Red Buoys on Gurnet and Bass Rocks are made, then follow the directions before given.

* In order to clear Howland's and High Pine Ledges, Plymouth Lights must not bear South of **S. by W.**

From the Southeastward, bring the Gurnet Lights in range, bearing **NW.**, and run for them until they are distant about $\frac{1}{2}$ mile, then proceed as before directed.

Sailing Directions for Plymouth Harbor at Night-time.

From the Northward, as soon as Plymouth Lights are made, bring them to bear **S.SW.**, and run for them on this course. Give these lights a berth of from 1 to 2 miles, leaving them to the Westward; continue the course to the Southward until Duxbury Pier Light bears **W.**, then run for it on this course; if there be no error in the compass, on this bearing you will pass in Mid-channel between Brown's Bank and Bass Rock. Continue the course **W.** for this light until the Gurnet Lights bear **NE.** by **E.**, then steer **W.** by **S.** until Duxbury Pier Light bears **W.** by **N.** $\frac{1}{2}$ **N.**, distance $\frac{3}{4}$ mile; the course is then **W.** $\frac{1}{2}$ **N.** Leaving this Light from 200 to 300 yards to the Northward, continue the course **W.** $\frac{1}{2}$ **N.** until it bears **N.**,* then run **NW.** by **N.**, leaving it about two cables' lengths to the Eastward, and anchor with the Light bearing about **E.SE.** from 300 to 400 yards distant.

Depth of Water entering Plymouth Harbor.

In running into Plymouth Harbor at Night (according to directions before given), with strong winds, it is advisable, when the Gurnet Lights bear **NW.**, to shorten sail and use the lead. With Duxbury Pier Light bearing **W.**, if there be no error in the Compass, when Gurnet Lights bear from **N.NW.** to **N.**, from $3\frac{1}{2}$ to $4\frac{1}{2}$ fathoms water will be found. From **N.** to **NE.** by **E.**, $3\frac{3}{4}$ to $4\frac{1}{2}$. On a **W.** by **S.** course to Duxbury Pier Light, bearing **W.** by **N.** $\frac{1}{2}$ **N.** $\frac{3}{4}$ mile, from $3\frac{1}{2}$ to 6 fathoms; from this last point, on a **W.** $\frac{1}{2}$ **N.** course to the Light, bearing **N.**, distant three or four hundred yards, from $3\frac{1}{2}$ to 11 fathoms; from this last point to the anchorage, from 5 to 12 fathoms. The depths above are all given at Low Tide, it will therefore be necessary at High Water to

* A Shoal extends about 200 yards Southeasterly from Duxbury Pier Light-house, and is very bold off its Southeastern part. Vessels bound into the Cow Yard should not approach nearer than 300 to 400 yards until the Light bears **N.**

make an addition of $1\frac{1}{2}$ fathoms to them; at $\frac{1}{3}$ flood $\frac{1}{2}$ fathom should be added.

At Night from the Eastward, or around Cape Cod, bring Race Point Light to bear **E.**, and make good the course **W.** for Gurnet Lights; as soon as Duxbury Pier Light is made, bring it to bear **W.** when the courses are as before given.

From the Southeastward, bring Plymouth, or Gurnet Lights, in range bearing **NW.**, and run for them until Duxbury Pier Light bears **W.**, then follow the directions before given.

Sagutsh Roads.

In these Roads vessels may find good shelter with winds from **W.** to **N.** The best anchorage is in about three fathoms at Low Tide, with Gurnet Lights bearing **E.NE.**, distance $\frac{3}{4}$ mile. At High water vessels should anchor in $4\frac{1}{2}$ fathoms.

Plymouth Inner Harbor.

If bound into this Harbor, follow the directions before given until abreast of the Red Buoy on Bass Rock, which bears **S.** $\frac{1}{4}$ **W.** from Gurnet Lighthouses, distance $\frac{1}{3}$ mile. Leave this Buoy a short distance to the Northward and make good the course **W.** $\frac{3}{4}$ **S.**, leaving the Red Buoys to the Northward and the Black Buoys off Brown's Bank to the Southward. As you approach Duxbury Pier Lighthouse you will see the Black Buoy off Dick's Flats bearing about **SW.** by **S.** $\frac{1}{2}$ **S.**, distant $\frac{1}{2}$ mile from it. Haul round this Buoy, leaving it 50 feet to the Eastward, and make good the course **SW.** $\frac{1}{2}$ **S.** As you sail in you will see on the port hand, near long Beach Point, a Beacon. Continue the course **SW.** $\frac{1}{2}$ **S.** until the beacon is in range with Gurnet Lights, bearing **E.** by **N.** $\frac{3}{4}$ **N.**, then anchor in from $2\frac{1}{2}$ to $3\frac{1}{2}$ fathoms water at Low Tide. This harbor should be used only by small vessels; large vessels should go into the Cow Yard. If bound up to Plymouth town it is advisable to take a pilot here, as the channel is both narrow and crooked.

Duxbury and Kingston.

Vessels unacquainted, bound to either of these places, should anchor a short distance to the Westward of Duxbury Pier Light, and take pilots.

Beating into Plymouth Harbor.

If you are bound into this Harbor you should not at Night-time attempt to beat into the Cow Yard, but may anchor in Saquish Roads. The best anchorage is in about 3 fathoms at Low Tide, and $4\frac{1}{2}$ at High Tide, the Gurnet Lights bearing **E.NE.**, distance $\frac{3}{4}$ mile. It is advisable at Night-time to use the lead, and when Gurnet Lights bear **N.NW.** to stand in for the North side of the harbor until the water shoals to $3\frac{1}{2}$ fathoms at Low Tide, and 5 at High Water; as soon as you have this depth tack ship, and do not stand to the Southward more than $\frac{1}{2}$ mile * (about 400 yards), in order to avoid Brown's Bank, which lies on the South side of the Channel, and is very bold at some parts of it, and you will have 4 fathoms at one cast of the lead, and be ashore at the next before you can tack; but you may boldly stand into $3\frac{1}{2}$ fathoms at Low Tide, and 5 fathoms at High Water, on the North side of the Channel, until you reach the above anchorage.

High Water.

It is High Water at Plymouth Harbor 12 minutes before it is at Boston. Mean rise and fall of tides $10\frac{1}{4}$ feet.

Scituate Harbor.

This Harbor is formed by a small shallow Cove, which at its entrance has a hard bed of stones and gravel, forming a Bar which varies but little in depth annually. The Northern point of the Harbor is marked with a Light Tower, from which a White Light was formerly exhibited, but for several years it has been discontinued. At this date (1879), however, a small light is shown from the tower by private enterprise. Also, at this date, the Harbor is well buoyed, and strangers, in vessels of from 8 to 9 feet draught, in case of emergency, might at high water run into it.

Sailing Directions for Scituate Harbor in Daytime, with favorable winds and fair weather.

From the Northward pass $\frac{1}{4}$ mile to the Eastward of Minot's Light and make good the course **SE.** by **S.**, in order to avoid the

* Or make short tacks.

Ledges which lie to the Northward of this harbor. A little before High Water bring the Light Tower to bear **W.** and run for it. When about $\frac{1}{2}$ mile from the entrance of the harbor you will see two Buoys, one Red the other Black; then steer more Southerly, and enter about midway between them. When between these Buoys you will see in a westerly direction two Spindles or Beacons, one Black the other Red; anchor a short distance outside of them, where you will lie aground at Low Tide, or after passing between these Spindles run directly for the wharves.

If the Buoys at the entrance of this place should be gone (as they sometimes are), in entering it keep midway between the points of the Harbor, and pass the Spindles as before directed.

From the Southeastward, or round Cape Cod, bring Race Point Light to bear **SE.** by **E.**, and make good the course **NW.** by **W.** When the Light Tower is made, bring it to bear **W.** by **N.**; then follow the directions before given.

The Light Tower, which is located on the Northern side of the entrance to this Harbor, bears **S.** by **E.** $\frac{1}{2}$ **E.**, about $4\frac{1}{2}$ miles from Minot's Lighthouse. From Race Point Light, **NW.** by **W.** 23 miles.

High Water.

It is High Water at Scituate Bar 14 minutes before it is at Boston. Common Tides rise about $9\frac{1}{2}$ feet.

Cohasset Harbor.

This Harbor is situated about $2\frac{1}{4}$ miles in a Southwesterly direction from Minot's Light, and has but little water in it at low tide. It is very difficult of access on account of the numerous Rocks and Ledges that lie off its entrance. In approaching this Harbor there are three Channels (generally used) called Brush Island Channel, Middle Channel, and Eastern Channel. In this work, however, we shall only give directions for Brush Island, or the Western Channel, which has the most water in it at Low Tide, and may be entered by strangers in Daytime, with favorable winds, when the Buoys can be seen.

Sailing Directions for Cohasset Harbor in Day-time, with favorable Winds and fair weather.

From the Southeastward leave Minot's Light about 300 yards to the Southward and run **W.** On this course you will see, on the port hand, two Buoys, one Black, the other Red. The Black Buoy No. 1 is placed near the western part of Hogshead Rock, and bears from Minot's Light **W. $\frac{1}{4}$ S.**; distance a little more than $\frac{1}{2}$ mile. The Red Buoy No. 2 is placed off the Northeast part of Grampus Ledge, and bears about **W.** from Minot's Light; distance $\frac{3}{8}$ mile. Both these Buoys should be left not less than 300 yards to the Southward. After passing the Red Buoy No. 2, off Grampus Ledge, a Black Buoy, No. 1, will be seen to the Southwestward; this Buoy lies off the West side of Chittenden Rock, which is bare at half tide, and bears from Minot's Light **W. $\frac{3}{4}$ S.**; distance $1\frac{1}{4}$ miles. Continue the course **W.** until this last-mentioned Buoy bears **SW.** by **S.**, then run for it on this course, leaving it 20 yards to the Eastward. When abreast of the last-mentioned Buoy, off Chittenden Rock, another Buoy will be seen (bearing **S.** by **E.**, distance $\frac{1}{4}$ mile), painted Red and Black in horizontal stripes. This Buoy lies on the Northern side of Barrel Rock, which is bare at half tide. Run directly for this Buoy, leaving it about 20 yards to the Eastward. When abreast of this Buoy, off the northern side of Barrel Rock, you will see a dry Rock, surrounded by ledges bare at low tide; these are called Sutton Rocks; and you will also, at the same time, see to the Westward of them another small, round, dry rock: this is called Quamino Rock: the Channel is between this and the Sutton Rocks. When you are abreast of the Red and Black horizontal-striped Buoy off Barrel Rock, run for Quamino Rock bearing **S.SW.**, leaving it 20 yards to the Westward. After passing it bring it to bear **N.NW.**, 75 yards distant, and run **S.SE.** about 200 yards; then anchor in about 8 feet water at low tide. If bound up to Cohasset, it is advisable to take a pilot here. By following the above directions, about 8 feet water at low tide can be brought up to this anchorage.

From the Northwestward pass about $\frac{1}{4}$ mile to the Eastward of Harding's Rocks, and bring the Beacon upon them to bear **NW. $\frac{1}{2}$ N.**, distance 1 mile, and steer **SE. $\frac{1}{2}$ S.** If there be no deviation from this course you will make the Red Buoy off the Grampuses a little on the port bow, and the Black Buoy off Chittenden

Rock on the starboard hand. When this last-mentioned Buoy bears **S.S.W.** run for it, leaving it 20 yards to the eastward. When abreast of it, make good the course **S. $\frac{1}{2}$ W.** into the harbor, passing between the Buoy on Barrel Rock, the Ledges on the West side of the Channel, Sutton Rocks, and Quamino Rock. When this last-mentioned rock bears **N.N.W.**, 75 yards distant, run **S.S.E.** about 200 yards, then anchor. If bound up to Cohasset, wait at this place for high water and a pilot.

High Water.

It is High Water at Cohasset about 12 minutes before it is at Boston. Common tides rise $9\frac{1}{2}$ feet.

Boston Harbor.

Dangers in approaching and entering this Harbor by the Main Ship Channel.

Minot's Ledge.

Upon one of the outermost of the Cohasset Rocks, on what is called the Outer Minot, which is bare at low tide, a Lighthouse has been erected, which (at this date, 1878,) has a Fog Bell and shows a Fixed White Light. From the deck of a common vessel this light should be visible at least 15 miles in clear weather.

The Bearings and Distances of this Light are as follows:

	Distance.
From Cape Ann (Thatcher's Island), SW. by S. nearly $23\frac{1}{2}$ miles.	
“ Whistling Buoy off NE. part	
Graves, . . . SE. by S. $\frac{3}{4}$ S. “	$7\frac{3}{4}$ “
“ Boston Lighthouse, . . . SE. $\frac{1}{4}$ E. “	$6\frac{3}{4}$ “
“ Spindle on Harding's Ledge, SE. $\frac{1}{2}$ E. “	$4\frac{1}{2}$ “
“ Race Point (Cape Cod), . . NW. $\frac{1}{2}$ W. “	$26\frac{1}{2}$ “
“ Cape Cod Highland Light, NW. $\frac{3}{4}$ W. “	$34\frac{1}{3}$ “

To the Westward of Minot's Light there are many bare and sunken Ledges. Strangers, therefore, should not attempt to pass to the Westward of it.

Davis' Ledge.

This Ledge, on which there are about 12 feet water, is marked with a Black Buoy No. 1, which lies upon its Eastern part, and bears **E. $\frac{3}{4}$ S.** from Minot's Light, distance about $\frac{2}{3}$ mile. There is a depth of 4 fathoms water about midway between the Buoy and Lighthouse. But large vessels should not attempt, excepting through stress of weather, to pass through it. To the Southward of this Lighthouse there are several Shoal Spots of from 12 to 15 feet, one of which bears **SE.** by **S.**; distance about $\frac{1}{2}$ mile.

Harding's Ledge.

The dry part of this ledge is marked with an Iron Beacon 31½ feet in height, and also an Iron Bell Boat, which is moored a short distance Northeastward from the Beacon. These Rocks are quite bold, and the lead gives but little warning in approaching them.

Bearings and Distances from Beacon on Harding's Ledge.

Distance.

Black Buoy No. 1, off Pt. Allerton, NW. by **W.** nearly $1\frac{3}{8}$ miles.
 Boston Lighthouse, **NW.** " $2\frac{1}{4}$ "
 Minot's Light, **SE. $\frac{1}{2}$ E.** " $4\frac{1}{2}$ "

SW., nearly $\frac{1}{4}$ mile from the Beacon on Harding's Ledge is a bare Rock. Between this rock and the Flats off Nantasket Beach is a good Channel for vessels of not more than 12 feet draught; but large vessels should use it with caution, as there are several Shoal Spots about half-way from the Beacon to the shore, having as little as 15 and 17 feet water upon them at Low Tide.

Thieves' Ledge.

Not less than $4\frac{1}{2}$ fathoms of water has been found upon this Ledge. At this date, 1878, it is not buoyed; the spot of $4\frac{1}{2}$ fathoms bears **E.** by **S. $\frac{1}{4}$ S.** from Boston Lighthouse; distance about $2\frac{3}{8}$ miles.

The Graves.

These are very dangerous Ledges extending about $\frac{1}{4}$ mile in a **N.NE.** and **S.SW.** direction. About **NE. $\frac{3}{4}$ N.**, $\frac{1}{4}$ mile from the dry part of these Ledges, is a dangerous Rock called the "Northeast Grave," which is bare at Low Tide. At this date,

* Boston Lighthouse shows a Flashing White light. A Fog Trumpet is placed near it, giving Blasts of 7 seconds at intervals of 43 seconds.

1878, this rock is marked with an Automatic Whistling Buoy, which is placed a short distance Northeast from it.

Bearings and Distances from this Buoy.

	Distance.
Egg Rock Light (red), N. by W. nearly 4 miles.	
Long Island Light, W. by S. $\frac{3}{4}$ S. " 4 $\frac{3}{4}$ "	
Boston Lighthouse, SW. $\frac{3}{4}$ S. " 2 $\frac{3}{4}$ "	
Minot's Light, SE. by S. $\frac{3}{4}$ S. " 7 $\frac{3}{4}$ "	

SW. by W., about $\frac{3}{4}$ mile from the Dry Graves, are several dangerous Rocks called the "Roaring Bulls"; they extend about $\frac{1}{3}$ mile in a NE. by E. $\frac{1}{4}$ E. and SW. by W. $\frac{1}{4}$ W. direction. Several of these rocks are bare at very low tides. Between the Graves and the last-mentioned rocks there is a Channel having a depth of from 5 to 8 fathoms. Strangers should not attempt to go through this passage. The Eastern part of the Graves are very bold, and there are 10 fathoms water within a stone's throw of the dry rocks. From the Eastward, therefore, in thick weather, the lead gives no warning in approaching these dangerous rocks: 10 fathoms water was found at a distance of about 200 yards N. by E. from the Northeast Grave, and 11 fathoms at a distance of 300 yards E. by S. from this rock.

Martin's Ledge.

Upon the Eastern part of this Ledge, in six fathoms water, is placed a Nun Buoy (No. 2). Boston Lighthouse bears from this buoy SW. by W. $\frac{3}{4}$ W.; distance $1\frac{3}{4}$ miles. From Whistling Buoy off the Graves S. $\frac{1}{2}$ W.; distance $1\frac{1}{2}$ miles. At very low tides there are but 14 feet water upon this Ledge.

Tewksbury Rock.

This Rock, which at very low tides has but 9 feet water upon it, bears W. $\frac{3}{4}$ N. from the Red Buoy on Martin's Ledge; distance $\frac{1}{2}$ mile. This rock is not buoyed at this date (1878).

Boston Ledge.

This Ledge, which has 11 feet water upon it, is left to the Northward in passing in. It is now marked with a Red Buoy No. 4, which lies on the southeasterly side of it. Boston Lighthouse bears from this buoy W. by S. nearly; distance $1\frac{1}{4}$ miles. The Buoy on this Ledge bears from Martin's Ledge SW. $\frac{1}{4}$ S.; distance $\frac{3}{4}$ mile.

ing Buoy,

Shag or Egg Rocks.

These are a group of bare Rocky Islets about 20 or 30 feet above high-water mark, and extending about $\frac{1}{3}$ mile in an Easterly and Westerly direction. The Southern part of these Islets bear **E. $\frac{3}{4}$ N.** from Boston Lighthouse; distance about $\frac{1}{2}$ mile. These rocks are bold, but they should not be approached nearer than $\frac{1}{8}$ mile by vessels bound in.

Distance.

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Point Allerton Bar.

From this Point a rocky Shoal extends off in a Northerly direction. It is marked with a Beacon, and also a Black Nun Buoy (No. 3), which, in passing in, is left on the port hand. This Buoy bears from Boston Lighthouse **S. by E. $\frac{1}{2}$ E.**; distance about $\frac{3}{4}$ mile.

Rock near Boston Lighthouse.

A Rock bearing **S. by E.** from Boston Lighthouse, distance about $\frac{1}{3}$ mile, has frequently been struck, at very Low Tides, by vessels of not more than 12 feet draught; it is not buoyed at this date. Boston Light should not be approached nearer than $\frac{1}{8}$ mile (250 yards) by vessels bound out or into the harbor.

Nash's Rock.

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from this

Whistling

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This Rock, on which there are 13 feet water at Low Tide, is marked with a Red Buoy (No. 6), which is placed in about 20 feet water off the Southern side of the shoal. The Narrows Lighthouse bears from this Buoy **W. by N.** nearly; distance about 1 mile. Boston Lighthouse **NE.**; distance $\frac{3}{8}$ mile. Nash's Rock lies nearly mid-channel, and may be left on either hand passing in.

Kelp Ledges.

er upon it,

; distance

These Ledges, which have from 10 to 12 feet water upon them at Low Tide, lie nearly on a line and also about midway between Boston and Narrows Lighthouses; they are not marked with buoys at this date. In sailing up the Lighthouse Channel, these Ledges are left on the starboard hand.

Toddy Rocks.

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boy No. 4,

house bears

The Buoy

; distance

These Rocks extend off about $\frac{1}{3}$ mile in a Northerly direction from the base of Nantasket Hill. At a distance of $\frac{1}{4}$ mile from the shore there are, at Low Tide, not more than 2 or 3 feet water upon some of them. A Black Buoy (No. 1), which marks their

position, is placed in 20 feet water, on the Northern side of the Ledge. This Buoy bears **SW. $\frac{1}{2}$ W.** from Boston Lighthouse; distance about $1\frac{1}{2}$ mile. In passing in, this Buoy is left on the port hand.

Hunt's Ledge.

N.NE. about $\frac{1}{2}$ mile from the Black Buoy off Toddy Rocks, a Buoy will be seen painted in Red and Black horizontal Stripes. This Buoy lies upon Hunt's Ledge, which has about 10 feet water upon it at Low Tide, and bears about **SW. by W.** from Boston Lighthouse; distance 1 mile. Between the Buoys off Toddy Rocks and Hunt's Ledge there is a good channel of from 4 to 5 fathoms water.

Centurion Rocks.

These Rocks, upon which there are about 12 feet water at Low Tide, extend **NW.** and **SE.**: they are marked with two Buoys, one Red, the other Black. The Red Buoy (No. 2) is placed on the Southeast end of the Ledge, and bears from Boston Lighthouse **W.SW.**; distance $1\frac{1}{4}$ mile. From Narrows Lighthouse, **SE. $\frac{3}{4}$ S.**; distance about $\frac{1}{2}$ mile. The Black Buoy (No. 5) is placed on the Northwest end of it, and bears from Narrows Lighthouse **SE. $\frac{3}{4}$ S.**; distance $\frac{3}{8}$ mile. These Buoys, in sailing up the main Ship Channel, are both left on the port hand.

George's Island Rocks.

These Rocks extend off nearly $\frac{1}{3}$ mile from the Eastern part of George's Island, and are marked with a Black Buoy (No. 7), which is placed on the Eastern part of them in 18 feet water. Narrows Lighthouse bears **N. $\frac{1}{4}$ E.**; distance about 400 yards from this Buoy. Between the last-mentioned Buoy and the two Buoys on the Centurion there is a Channel of about 4 fathoms water.

False Spit Beacon.

A little more than $\frac{1}{4}$ mile in an Easterly direction from the Narrows Lighthouse is a Beacon, which marks the Southeast part of a Sand Bar, called "False Spit." In passing in, this Beacon is left on the Starboard hand.

Narrows Lighthouse.

This Lighthouse is erected on the extreme Southwest part of the Sand Spit, which is on the Northern side of the main Ship Channel,

nearly opposite Fort Warren, and shows a Red Fixed Light. In order to avoid the shoal water extending from George's Island, vessels bound up through the Narrows should keep near to this Lighthouse.

Lovell's Island.

The Southeast part of this Island lies $\frac{1}{4}$ mile Northwesterly from the Narrows Lighthouse, and the Island also lies on the Northeasterly side of the Narrows. It is bold on its Southwestern side, but long Ledges, and a Shoal called "Seventy-four Bar," extend from its Northern and Northwestern parts. A Red Buoy (No. 10) marks the Northwestern part of this bar, which, in passing in, is left on the Starboard hand.

Galloup's Island.

This Island lies on the Western side of the Narrows, nearly opposite Lovell's Island: its sea-face is protected from the force of the waves by a granite sea-wall nearly a mile in length. The Eastern point of the Island is bold, but Shoal Water extends off from it in a Northerly and Northwesterly direction. A Beacon, painted Black, is erected about $\frac{3}{8}$ mile from it, which will be seen on the port when sailing up the Narrows. This is called "Nix's Mate Beacon." Northeast about $\frac{1}{8}$ mile from the Beacon is placed a Black Buoy (No. 9), which, in passing in, is left on the port hand.

Deer Island.

A dry Shoal extends off about $\frac{1}{4}$ mile in a Southerly direction from this Island, upon the South end of which is erected a Beacon, which is painted Red, and bears from Long Island Lighthouse * N. by E. $\frac{3}{4}$ E.; distance about $\frac{5}{8}$ mile. In passing in, this Beacon is left on the Starboard hand.

Long and Spectacle Islands.

These Islands are, both quite bold on their Northern parts. Shoal Water extends off in a Northerly direction about 200 yards from the first-mentioned Island, and about the same distance from the latter.

President Roads.

There is good anchorage between the Lower Middle, Governor's Island Flats, and Apple Island Flats on the North, Deer Island

* Long Island Lighthouse shows a fixed White Light.

on the East, Long and Spectacle Islands on the South, and Castle Island on the West. The above anchorage is called "President Roads."

Lower Middle.

A short distance to the Eastward of Fort Independence (Castle Island) is the Lower Middle, some parts of which are bare at Low Water. This shoal extends **E.SE.** and **W.NW.** about 1 mile, and is marked with two Red Buoys, one of which is placed on its Southeast part, the other on the Northwest part. The Red Buoy (No. 6) on the Southeast part of it, bears from Long Island Light-house **NW.** by **W.** $\frac{1}{4}$ **W.**; distance $1\frac{1}{2}$ miles. From Deer Island Beacon **W.** $\frac{1}{2}$ **N.**; distance $1\frac{1}{2}$ miles. From Black Buoy (No. 9), off Nix's Mate, **W.** by **N.** $\frac{3}{4}$ **N.**; distance 2 miles. The Red Buoy (No. 10), upon the upper part of Lower Middle, bears from the wharf at Fort Independence **E.** by **N.** $\frac{1}{4}$ **N.**; distance $\frac{1}{4}$ mile. Between the Lower Middle and Governor's Island Flats is a narrow Channel having from $3\frac{1}{2}$ to 5 fathoms water in it. Strangers should not attempt to go through this passage.

Castle Island Rocks and Shoals.

Shoal Water extends off in every direction from this Island, excepting its Northeast part, which is quite bold. Southeast, about $\frac{1}{2}$ mile from the Island, is placed, in 18 feet water, a Black Nun Buoy (No. 7), which bears from Long Island Light **W.** by **N.** $\frac{3}{4}$ **N.**; distance $2\frac{1}{8}$ miles. From Black Buoy (No. 9) off Nix's Mate, **W.** by **N.** $\frac{1}{4}$ **N.**; distance $2\frac{3}{4}$ miles. A short distance to the westward of this Buoy, upon some of the rocks, there is but little water. Vessels beating up, when abreast of this Buoy, should keep to the Eastward of a line drawn from the Buoy to the Western part of Governor's Island. This precaution should be strictly adhered to until more than half-way from the Buoy to the wharf * off Northeast part of the Fort.

Siata Ledge.

On the Northern side of the Channel, nearly opposite (and bearing **NE.** by **E.** $\frac{1}{2}$ **E.** from Black Buoy, No. 7, off Castle Island), is a Red Nun Buoy (No. 8), which is placed a short distance South of the Ledge, which has but 3 or 4 feet water upon it at Low Tide. In passing in, this Buoy is left on the Starboard hand.

* The outer part of this wharf is in sixteen feet water.

Governor's Island Flats.

These Flats extend Southwesterly about $\frac{1}{4}$ mile from the Southern point of the Island. Some parts of them are bare at Low Tide. A Red Buoy (No. 12), placed in 15 feet water, marks the Southwest end of this Shoal. The wharf at Fort Independence bears from this Buoy, SW. by S. $\frac{1}{2}$ S.; distance about $\frac{1}{4}$ mile. This last-mentioned Buoy, and also the two Red Buoys on Northwest part of Lower Middle and State Ledge, lie nearly on a line. Beating up the harbor, vessels should not pass to the Eastward of this line.

Upper Middle.

From the Northern part of Castle Island, Shoal Water extends in a Northwesterly direction, nearly two miles, forming what is known as South Boston and Dorchester Flats. About $\frac{1}{3}$ mile N.N.W. from the wharf at Fort Independence is a small spot of 3 feet water at Low Tide; this spot is called the Upper Middle. Strictly speaking, this Shoal is not a Middle Ground, as there is not any Channel to the westward of it. The above-mentioned spot, called the "Upper Middle," is marked with a Black Buoy (No. 9), which is placed a short distance from its Eastern part. This Buoy bears N.N.W. about $\frac{1}{2}$ mile from the wharf at Fort Independence.

Governor's Island Northwest Flats.

These Flats extend about $\frac{1}{4}$ mile in a Westerly direction from the Northwest part of Governor's Island. A Black Buoy (No. 7) is placed on the Northwest part of these flats, which, in passing in, is left about $\frac{1}{8}$ mile on the Starboard hand.

Slate Ledge.

About half-way from the Buoy on the Upper Middle to the city is a Black Buoy (No. 11). This Buoy lies in 17 feet water, upon the Northeastern part of this Ledge, some parts of which are bare at very Low Tides. There is no passage to the Westward of this Buoy excepting at High Water, and then for only light-draught vessels.

*By Main Ship Channel.***Sailing Directions from Cape Cod to Boston in Day-time, with favorable winds and fair weather.**

When Cape Cod Highland Light bears **SW.**, about 3 or 4 miles distance, the course to Boston Light (at this date, 1879 *) is **NW.** by **W.** $\frac{1}{4}$ **W.**; distance 42 miles. If there be no deviation from this course, Minot's Light will be left about $1\frac{1}{3}$ miles to the Westward. As soon as Boston Lighthouse is made, bring it to bear **NW.** by **W.** $\frac{1}{4}$ **W.**, and run for it. On this course the Bell Buoy off Harding's Ledge will be left about $\frac{1}{2}$ mile to the Westward. Continue the course **NW.** by **W.** $\frac{1}{4}$ **W.** for the Lighthouse, until Point Allerton † bears **SW.** by **W.** Boston Lighthouse will then be distant about $1\frac{1}{8}$ mile. The course to enter the Lighthouse Channel is then **W.** $\frac{3}{4}$ **N.**, leaving the Beacon and Black Buoy off Point Allerton about $\frac{1}{4}$ mile on the Port hand. In sailing up the Channel, you will see on the Starboard bow the Red Buoy (No. 6) on Nash's Rock, which is left on the Starboard hand; you will also see on the Port, the Black Buoy on Toddy Rocks, the horizontal-striped Buoy on Hunt's Ledge, the two Buoys on the Centurion, one Black the other Red, and nearly ahead the Black Buoy off the Southeast part of George's Island: all these last-mentioned Buoys are left on the Port hand. Continue the course **W.** $\frac{3}{4}$ **N.** until the Narrows Lighthouse bears **NW.** $\frac{3}{4}$ **W.**; run for it on this course: give the Lighthouse a small berth of about 150 yards, leaving it on the Starboard hand, and run about **NW.** $\frac{1}{2}$ **W.** with the eastern point of Galloup's Island on the Port bow. *In sailing this last course from Narrows Light to Lovell's Island, particular attention must be given to the setting of the Current, especially with light winds. The Flood sets in strong through Black Rock Channel ‡ on to George's Island, while the Ebb sets out strong through this channel. Through the Narrows the Flood, during a*

* The variation of Compass at Cape Cod Highland Light in 1808 was $5^{\circ} 30'$ **W.** It is now (1879) $12^{\circ} 00'$ **W.**

† This headland or point is on the South side of the entrance to the Main Ship Channel. It is a bare hill 115 feet high.

‡ The passage between Narrows Lighthouse and Southeast part of Lovell's Island is called Black Rock Channel. A ledge lies nearly midway the passage, having at very low tides but 7 feet water upon it.

part of its period, sets to the Southward, but is not strong; the Ebb, which is strong, sets to the Northward through this last-mentioned place. When abreast of the eastern part of Galloup's Island, the course is about **NW.** by **N.**, keeping nearest to Lovell's Island, which is quite bold. As you sail through the Narrows, you will see, on the port, Nix's Mate Beacon, and the Black Buoy No. 9, and also, on the starboard, the Red Buoy No. 8, on Seventy-Four Bar. Leave the Black Buoy off Nix's Mate a short distance to the Westward, and run **NW.** for Deer Island Beacon, about $\frac{1}{2}$ mile, or until Long Island Light bears **W.SW.** From this last point make good the course **W.** $\frac{3}{4}$ **N.** until you see the Black Buoy No. 7, which lies off Southeast from Castle Island: you will also see the Red Buoy No. 8, which lies on State Ledge. Pass about midway between the two last-mentioned buoys, and steer about **NW.** $\frac{1}{2}$ **N.**, keeping the Black Buoy No. 9, on the Upper Middle, a little on the Port bow. On this last course you will see the two Red Buoys, Nos. 10 and 12, on **NW.** part of Lower Middle and off Governor's Island, both of which are left on the Starboard hand. When abreast of Black Buoy No. 9, on Upper Middle (which must be left about fifty yards to the Westward), for the deepest water make good the course **NW.** $\frac{3}{4}$ **N.**, about $\frac{1}{2}$ mile, leaving a Red Buoy a short distance on the Starboard hand. When abreast of this last-mentioned buoy, steer **NW.** by **W.** for the anchorage.

By Main Ship Channel.

Vessels approaching Boston Harbor at Night will find the following directions best adapted to winds from East to Southwest by the way of South.

Sailing Directions from Cape Cod to Boston in the Night-time, with favorable winds and fair weather.

Run **NW.** by **W.** $\frac{1}{4}$ **W.** from Cape Cod (Highland Light) as before directed. As soon as Boston Light is made, bring it to bear **NW.** by **W.** $\frac{1}{4}$ **W.**, and run for it. On this course Minot's Light will be left about $1\frac{1}{3}$ mile to the Westward. Continue the course **NW.** by **W.** $\frac{1}{4}$ **W.** for the Light, until the Narrows Light (Red) is in range with Long Island Light, bearing **NW.** by

W. $\frac{3}{4}$ W.; then run in on this range * until Boston Light bears **NW.**: you are then about half-way from the Beacon on Harding's Ledge to Black Buoy off Point Allerton, and must run a little more Northerly (**NW. by W. $\frac{1}{2}$ W.**), keeping the Red Light on Spit a little open to the Westward of Long Island Light in order to clear Point Allerton Ledge. When Boston Light bears **N. by W. $\frac{1}{2}$ W.**, you are then on a line with the Light and Point Allerton Buoy, and must make good the course **W. by N.** until the Narrows Light bears **NW. $\frac{3}{4}$ W.**, on which bearing keep it and run for it, leaving it about 75 yards on the Starboard hand; then make allowance for the current as before directed. From this last-mentioned light to East point of Galloup's Island the course is **NW. $\frac{1}{2}$ W.**; but at night the eye must be the pilot through the Narrows to the Black Buoy off Nix's Mate. It is therefore recommended to keep a sharp lookout for the Eastern part of Galloup's Island, and also the Southern part of Lovell's Island, both of which are bold. When abreast of the Eastern point of Galloup's Island, keep nearest to Lovell's Island. When abreast of Black Buoy off Nix's Mate, run **NW.** until Long Island Light bears **W.SW.**; then make good the course **W. $\frac{1}{2}$ N.**, until Long Island Light bears **E. by S. $\frac{3}{4}$ S.**; on which bearing keep it, and run **W. by N. $\frac{3}{4}$ N.**,† keeping a sharp lookout for the Buoy off Castle Island. In running this last course, use the lead, and as soon as the water shoals to $3\frac{1}{2}$ fathoms at low tide (which will be five fathoms at high tide), you are then close aboard of the Buoy, and must steer **N. by W. $\frac{1}{2}$ W.**, about $\frac{1}{4}$ mile, then about **NW. $\frac{3}{4}$ N.**, until up with the Black Buoy on the Upper Middle. Running the two last courses, do not go into less than 4 fathoms water. When abreast of the buoy on the Upper Middle, continue the course **NW. $\frac{3}{4}$ N.** about $\frac{1}{3}$ mile, then run **NW. by W.** for the anchorage: upon the last two courses use the lead, and do not go into less than 3 fathoms.

* In running in with Long Island and Narrows Light in range, the Beacon on Harding's Ledge will be left about $\frac{1}{4}$ mile to the Westward. This range also leads to Black Buoy No. 8, on Eight Foot Rock, off Point Allerton.

† If there be no error in the compass, this course **W. by N. $\frac{3}{4}$ N.** from Long Island Light leads direct to Black Buoy No. 7, off Southeast from Castle Island.

*By Main Ship Channel.***Sailing Directions from Cape Ann to Boston in Daytime, with favorable Winds and fair weather.**

Bring Thatcher's Island Lights to bear NE. $\frac{1}{4}$ E., distance about two miles, on which bearing keep them, and run SW. $\frac{1}{4}$ W. for Point Allerton; distance 22 miles. If there be no deviation from this course, East Point Light will be left about $1\frac{1}{2}$ miles to the Northwestward, Halfway Rock $2\frac{3}{4}$ miles, and Whistling Buoy off the Graves, $1\frac{1}{2}$ miles to the Northward. You will also see the Red Buoys on Martin's and Boston Ledges, which are both left on the Starboard hand. Continue the course for Point Allerton (bearing SW. $\frac{1}{4}$ W.) until Boston Lighthouse bears W. $\frac{1}{2}$ N., then make good the course W. by S., and follow the directions before given from Cape Cod to Boston in daytime, with favorable winds and fair weather.

At night, in fair weather, bring Thatcher's Island Lights to bear NE. $\frac{1}{4}$ N., distance 3 or 4 miles, and run SW. $\frac{1}{4}$ S. If this course be made good, the following dangers — Halfway Rock, Graves, Martin's, and Boston Ledges — will all be left a good distance on the Starboard hand. When Boston Light bears W.NW. make good the course W. by N. for the Lighthouse Channel, taking care to keep the Narrows Light (Red) just open to the Westward of Long Island Light, until Boston Light bears N. by W. $\frac{1}{2}$ W., then follow the directions from Cape Cod to Boston in the Night-time, with favorable winds and fair weather. To guide the mariner in thick weather (at this date, 1878,) there is placed near the Lighthouses at Thatcher's Island a Steam Whistle; at Eastern Point, a Fog Bell; off the Graves, a Whistling Buoy; and at Boston Lighthouse, an Air Trumpet, all of which are sounded in Thick weather. The ear, therefore, assisted by the compass and lead, will be the pilot from Cape Ann to Boston Light, when the other Lights cannot be seen.

*Broad Sound.***Dangers in entering Boston Harbor through this Sound.***The Graves.*

In sailing into Broad Sound, these Dangerous Rocks are left on the Port hand. (See description of *Graves*, p. 29, &c.)

Maffit's Ledge.

This Ledge, on which there are 18 feet water at Low Tide, bears NW. by N. $\frac{1}{2}$ N. from Green Island,* distance $\frac{1}{4}$ mile. It is not buoyed at this date (1878), and Light-Draught Vessels pay no attention to it passing into this Sound.

Commissioner's Ledge.

This Ledge, on which there are 15 feet water at Low Tide, is not buoyed at this date (1878). It bears from the Northern point of Green Island NW. by W. $\frac{1}{2}$ W., distance about $\frac{1}{2}$ mile. In sailing into Broad Sound, this Ledge is left on the Port hand.

Devil's Back.

This Ledge, which in several places is bare at Low Tide, extends about 300 yards in a NE. by N. and SW. by S. direction. It is marked with a Black Can Buoy (No. 1), which is placed on the Northern side of the Ledge. Long Island Light bears from this Buoy W. by S. $\frac{3}{8}$ S., distance $2\frac{3}{5}$ miles; Northern part of Green Island, E. $\frac{1}{2}$ S., distance about $\frac{3}{4}$ mile. The Eastern part of these Rocks are very bold, and 5 fathoms water was found within a stone's-throw of them. From the Eastward, in thick weather, bound into the Sound, the lead, therefore, gives no warning in approaching them.

Alderidge's Ledge.

Which has but little water upon it at Low Tide, is marked with a Black Can Buoy (No. 3), which is placed on the Northwest part of it. Long Island Light bears from this buoy W. by S. $\frac{1}{2}$ S., distance $2\frac{1}{2}$ miles; Narrows Light S. by W. $\frac{3}{4}$ W., distance $1\frac{1}{2}$ miles.

Strangers beating into the Sound should not pass to the Eastward of this buoy.

Ram Head Reef.

From the Northeastern part of Lovell's Island a Reef extends off about $\frac{1}{2}$ mile in a NE. by N. direction. Some parts of this Shoal are bare at Low Tide. It is marked with a Black Can Buoy (No. 5), which is placed off its Northeast point. Long Island Light bears

* Coming from the Northeastward, bound into Broad Sound, this is the first Island met with on the South side of the Channel.

from this Buoy **W.** by **S. $\frac{1}{2}$ S.**, distance about $1\frac{1}{2}$ miles; Narrows Light, **S. $\frac{1}{4}$ E.**, distance $1\frac{1}{2}$ mile. From the Black Buoy on the Devil's Back to the Black Buoy off Ram Head Reef, the channel is narrow, and vessels beating into Broad Sound at Low Tide should not stand but a short distance to the Northwest, until after passing Ram Head Buoy. The lead gives but little warning in approaching this Reef.

Great Fawn Bar.

This Bar extends off from the middle of Deer Island in an Easterly direction more than $1\frac{1}{2}$ miles, and is dry at Low Tide, about $\frac{3}{4}$ mile from the shore. Upon the Eastern end of this part a Beacon is erected, which is painted red, and has a square granite base surmounted by a granite cap, with iron spindle and cage. This Beacon bears from Whistling Buoy, off the Graves, about **W. $\frac{1}{2}$ S.**, distance $3\frac{3}{4}$ miles; from Nahant Head **SW.** by **S.**, distance $4\frac{1}{4}$ miles. About **E.SE.**, $\frac{1}{2}$ mile from the Beacon, is placed in about 13 feet water, at Low Tide, a Red Can Buoy (No. 2), which is intended to mark the deepest water across this Bar. From $\frac{1}{4}$ to $\frac{1}{2}$ mile in an Easterly direction from the Buoy there are several shoal spots of from 10 to 12 feet water. This Buoy bears from Whistling Buoy off the Graves **W. $\frac{3}{4}$ S.**, distance $3\frac{1}{4}$ miles; Long Island Light from it, **SW. $\frac{1}{2}$ W.**, distance $1\frac{3}{4}$ miles. Passing in, this Buoy is left about 25 yards on the Starboard hand.

Little Fawn Bar.

This Shoal extends off about **E.** by **S. $1\frac{1}{4}$** miles from the Southern part of Deer Island, and is dry at Low Tide about $\frac{3}{4}$ mile from the shore. About 200 yards to the Eastward of the Dry Bar, in 13 feet water, is placed a Red Can Buoy (No. 4), which is intended to mark the deepest water at Low Tide (13 feet) across the Bar. About 250 yards East from the Buoy there are 10 feet water, and **E.** by **S. $\frac{3}{4}$** mile but 8 feet. This last spot is called the Middle Ground, and bears from the Red Buoy on Ram Head Reef **N.** by **W. $\frac{1}{4}$** mile. Long Island Light bears from the Buoy on Little Fawn Bar **SW. $\frac{1}{2}$ S.**, distance $1\frac{1}{2}$ miles; Beacon off South Point of Deer Island, **SW.** by **W. $\frac{3}{4}$ W.**, distance $\frac{3}{2}$ mile.

Remarks.

In entering Boston Harbor by the way of this Sound, there are two passages, called the North and South Channels. The North Channel, which is marked with two Red Can Buoys, is across Great and Little Fawn Bars, and has a depth of about 12 feet water at Low Tide. The South Channel (which at this date [1878] is marked with three Black Can Buoys) has a depth of about 20 feet at Low Tide. With favorable winds, entering Broad Sound, a vessel cannot sail in the deepest water on one direct course for Long Island Light, in either of these Channels.

**Sailing Directions from Cape Ann to Boston, by
the way of South Channel (Broad Sound), in
Daytime, with favorable winds and fair weather.**

Vessels passing between Thatcher's Island and the Londoner, will, after leaving the latter, steer **SW. $\frac{1}{2}$ W.**, which is the direct course from the Londoner to the Graves. As soon as Long Island Lighthouse is made, bring it to bear **SW. by W. $\frac{3}{4}$ W.**, and run for it. On this last course, if there be no error in the compass, the Whistling Buoy off the Graves will be left on the Port hand about $\frac{3}{4}$ mile; and as you approach nearer Long Island Lighthouse, you will see nearly in line three Black Can Buoys. The first is on the Northern part of Devil's Back; the second on Northwestern part of Alderidge's Ledge; and the third off Ram Head Ledge. Continue the course **SW. by W. $\frac{3}{4}$ W.** for the Lighthouse, until the first Black Can Buoy bears **S. by W.**; then steer more Southerly, leaving the three Black Buoys about 150 yards on the Port hand.* On these courses you will have a depth of not less than 20 feet water at Low Tide. When abreast the Black Buoy No. 5, off Ram Head Reef, make good the course **W. by S. $\frac{1}{2}$ S.**, until Nix's Mate Beacon bears **S. by E.**; then follow the directions for Main Ship Channel from Cape Cod to Boston in Daytime, with fair weather. The Southern Channel of Broad Sound is perfectly safe for vessels of 20 feet draught, but should not be attempted by strangers in large or heavy-draught vessels when the Buoys cannot be seen.

* The current of Ebb between the Buoys on Ram Head Ledge and Alderidge's Ledge sets strong to the Eastward; therefore, with light winds, bound out or in, care must be taken not to be carried on to Alderidge's Ledge.

Directions for Vessels of not more than 10 or 11 feet draught, entering Broad Sound in thick weather.

Having made the Whistling Buoy off the Graves, bring it to bear E. by N., about $\frac{1}{2}$ mile distant, and make good the course W. by S.; when the water shoals to $3\frac{1}{2}$ fathoms, at Low Tide, Long Island Light will bear SW. by W. $\frac{1}{2}$ W., distance $2\frac{3}{4}$ miles. From this last point steer SW. by W. $\frac{3}{4}$ W., which course made good, leads across Fawn Bars, in about 11 feet water at Low Tide, into the Ship Channel. It is, however, advisable for vessels of more than 10 feet draught to wait, if possible, until at least $\frac{1}{3}$ flood before running in upon these courses. In running W. by S. in thick weather, from the Whistling Buoy off the Graves until you shoal to $3\frac{1}{2}$ fathoms water, it is highly important that allowance should be made for the Tide, which rises and falls about $1\frac{1}{2}$ fathoms at this place. It must be evident, therefore, that $3\frac{1}{2}$ fathoms, at $\frac{1}{3}$ flood becomes 4 fathoms, at $\frac{2}{3}$ flood $4\frac{1}{2}$, and at high water 5 fathoms. The judicious mariner will therefore make allowance for this rise and fall as circumstances require, before running SW. by W. $\frac{3}{4}$ W. into the Harbor, or Ship Channel.

Directions for approaching Nantasket Roads in thick Weather.

Vessels of not more than 12 feet draught from the Eastward, making or hearing the Whistling Buoy off the Graves, may bring it to bear N. by E., distance $\frac{1}{2}$ mile, and make good the course S. by W. $2\frac{1}{4}$ miles, or until the Fog Signal at Boston Lighthouse bears W. by N.; the course is then W. $\frac{1}{2}$ S. into the Roads. In running this last course, the ear, assisted by the compass and lead, will be the pilot. The course made good S. by W. from Whistling Buoy off the Graves, passes $\frac{1}{6}$ mile to the Westward of the Red Buoy No. 2, off Martin's Ledge, $\frac{1}{6}$ mile to the Eastward of Red Buoy No. 4, off Boston Ledge, and $1\frac{1}{4}$ miles to the Eastward of Boston Lighthouse.

Sailing Directions from Cape Ann to Boston, by the way of North Channel (Broad Sound), in Day-time, with favorable winds and fair weather.

Vessels passing between Thatcher's Island and the Londoner* will, after leaving the latter, run **SW.** $\frac{7}{8}$ **W.** for Long Island Light; if the course is made good, Halfway Rock will be left about $1\frac{1}{4}$ miles to the Westward, and Whistling Buoy off the Graves about the same distance to the Eastward. As soon as Long Island Lighthouse is made, bring it to bear **SW.** $\frac{1}{2}$ **W.**, and run for it on this bearing. As you approach it, you will see directly ahead a Red Can Buoy, No. 2, which marks the deepest water (about 12 feet at Low Tide) across Great Fawn Bar. Pass close to this Buoy, leaving it to the Westward, and run $\frac{3}{4}$ mile **SW.** by **W.** $\frac{1}{2}$ **W.** for Red Can Buoy No. 4, on Little Fawn Bar. This last Buoy marks the deepest water (about 12 feet at Low Tide) across the Bar, and must also be left a short distance to the Westward. When abreast of it, make good the course **SW.** for Long Island Light, and proceed according to directions before given.

Sailing Directions from Cape Ann to Boston (by way of Broad Sound) in the Night-time, with favorable winds and fair weather.

When Thatcher's Island Lights bear **W.NW.**, distance about 3 miles, make good the course **SW.** by **W.** $\frac{1}{4}$ **W.**, and as soon as Long Island Light is made, bring it to bear **SW.** by **W.**, and run for it on this bearing. Continue this course until the Light is distant about $\frac{1}{2}$ mile; then proceed according to directions before given from Cape Cod to Boston at Night-time.

Although this bearing **SW.** by **W.** for Long Island Light crosses both Great and Little Fawn Bars, where there is, in some places, not more than 11 feet water at Low Tide, yet I consider it the safest course for strangers at Night, in vessels of not more than 10 feet draught. If there should be a heavy sea on the Bars, it is recommended to wait until about half flood, when 14 feet may be

* The Londoner is a dangerous Ledge, dry at low tide, and extends in a NE. by N. and SW. by S. direction about $\frac{1}{4}$ mile. It is marked with an Iron Spindle 45 feet high, with an Octagonal Cage on top. This Spindle bears from the Northern Lighthouse on Thatcher's Island **SE.**; distance $\frac{1}{2}$ mile nearly.

carried on this course over them without danger. From $\frac{1}{3}$ to $\frac{1}{2}$ flood, at Night, you may beat safely into Broad Sound if your vessel does not draw over 12 feet water, with Long Island Light bearing from **SW. $\frac{1}{2}$ W. to SW. by W. $\frac{1}{2}$ W.**

Nantasket Roads in Daytime, with favorable winds and fair weather.

Leave the Black Buoy No. 3, off Point Allerton, about 100 yards to the Southward, and make good the course **W. by N.** for the Horizontal-Striped Buoy off Northern part of Hunt's Ledge; leave this last-mentioned Buoy a few yards to the Southward, and run **W. $\frac{1}{2}$ S.** until Long Island Lighthouse is well open to the Westward of George's Island; then haul up for it, bearing **NW. $\frac{1}{2}$ N.**, and run in, *under short sail*, midway between the Black Buoy No. 1, off Eastern part of Hospital Shoal and George's Island, and anchor in from $3\frac{1}{2}$ to 5 fathoms water, the Northwestern part of George's Island bearing about **E.NE.**

Nantasket Roads at Night, with favorable winds and fair weather.

Follow the directions given from Cape Cod to Boston in the Night, with favorable winds and fair weather, until Boston Light bears **NE. by E. $\frac{3}{4}$ E.**, on which bearing keep it, and run **SW. by W. $\frac{3}{4}$ W.**, keeping a sharp lookout for the Buoy on the Centurion. If there be no deviation from this course, the Red Buoy No. 2, on Southeast part of the Centurion, will be left about 100 yards on the Starboard hand. When abreast of it, steer **W. by S. $\frac{1}{2}$ S.**, until Long Island Light bears **NW. $\frac{1}{2}$ N.**; then run for it on this bearing *under short sail*, and anchor when Boston Light is shut in behind George's Island, in from $3\frac{1}{4}$ to 5 fathoms water. In running in **SW. by W. $\frac{3}{4}$ W.** from Boston Light, if you should not make the Buoy on the Centurion: When the Narrows Light bears **NW. by N.**, steer **W. by S. $\frac{1}{2}$ S.**, until Long Island Light bears **NW. $\frac{1}{2}$ N.**; then proceed as before directed. Vessels from the Eastward bound into Nantasket Roads may bring the Narrows Light to bear **W. by N. $\frac{1}{2}$ N.**, and run for it on this bearing, until Boston Light bears **NE. by E. $\frac{3}{4}$ E.**; then follow the directions before given. In Thick weather, at Daytime, when Boston Lighthouse cannot be seen, the ear, assisted by the

compass and eye, will be the pilot into Nantasket Roads. Vessels from Nantasket Roads bound to the city may pass between George's and Galloup's Island into the Narrows.

President Roads.

If intending to anchor in these Roads, follow the directions before given for Broad Sound and Main Ship Channel, at Night or Day, until Long Island Light bears **W.SW.**; then make good the course **W. $\frac{1}{2}$ N.** until Long Island Lighthouse bears **SE.** by **E.**; then haul in **SW.** by **S.**, and anchor in from $4\frac{1}{2}$ to $5\frac{1}{2}$ fathoms water, the Light bearing about **E.** by **S. $\frac{1}{2}$ S.**

Back or Western Way.

The entrance to this Passage is between the Southwest end of Long Island, Moon Head, Thompson's and Spectacle Islands.

Sailing Directions for Back or Western Way in Daytime, with favorable winds and fair weather.

Follow the directions for Nantasket Roads in Daytime until abreast of Red Buoy No. 2, on Southeast part of Centurion; then run **W.SW.** until Long Island Lighthouse is well open to the Westward of George's Island, bearing **NW. $\frac{1}{2}$ N.**; then run for it on this course, passing about midway between George's Island and Black Buoy No. 1, off Eastern part of Hospital Shoal. When the South part of George's Island bears **E.** by **S.**, make good the course **W.** by **N.** until you open the Passage between Rainsford Island and the Southeast point of Long Island; then steer **SW.** by **W.**, keeping about midway between the two Islands. Continue the course **SW.** by **W.** until the Back Way opens; then steer **N.NW.** through the Passage, keeping nearest to Long and Spectacle Islands. When the Northern part of the last-mentioned Island bears **E.** by **S.**, run about **N.** until abreast of Black Buoy No. 7, off **SE.** part of Castle Island; then proceed according to directions before given. About 9 feet water can be carried through this Channel at Low Tide.

Vessels with strong **NW.** winds beating up the Harbor may, on the first of the flood, use this Channel; and vessels with **SE.** winds, on the first part of the ebb, beating down into Nantasket Roads or to sea, should make use of this Passage, as the current of

ebb sets strong to the Northward through the Narrows, and it requires a smart-working vessel to beat through this Passage with **SE.** winds and an Ebb Tide. In beating through the Back or Western Passage, the deepest water will be found nearest Long and Spectacle Islands.

Directions between Long and Spectacle Islands.

Vessels with **NW.** winds beating up the Back Way, when abreast of the **SW.** end of Long Island, will see on the Eastern side of the Channel a Red Buoy, No. 2, which lies off the **SE.** part of Sculpin Ledge,* and is intended to mark the Channel between Long and Spectacle Islands. When this Buoy is in range with Long Island Light, bearing about **NE.** by **E.**, run for it, leaving it about 20 yards on the Port hand. When abreast of it, make good the course **NE.** by **N.**, leaving the Black Buoy off Hotel Wharf about $\frac{1}{2}$ mile to the Eastward. When this last-mentioned Buoy bears **SE.** by **S.**, haul sharp upon the wind into the Main Ship Channel. About 12 feet water at Low Tide can be carried through between Long and Spectacle Islands. This last-mentioned depth (12 feet) is about **SW.** by **W.** $\frac{1}{4}$ mile from the Red Buoy off Sculpin Ledge.

The space between Point Allerton and Point Shirley is full of Islands; the several Channels which lead into Boston Harbor are between them. The most common in use is the Main Ship Channel, North and South Broad Sound Channels, and Back or Western Way. The Hypocrite, Black Rock, and Shirley Gut Channels are considered *as being too intricate for strangers; sailing directions for them are, therefore, omitted.*

* Sculpin Ledge lies about half-way and nearly on a line between the **SW.** and **S.** points of Long and Spectacle Islands. It is a long Reef extending **E.SE.** and **W.NW.** nearly 400 yards. Several of the rocks upon it are awash at low tide. A Red Buoy, No. 2, is placed off its **SE.** part. In beating up or down the Back Way, in order to clear this ledge, care must be taken to keep Governor's Island open to the westward of Spectacle Island.

Hingham Harbor.

For approaching and entering this Harbor, follow the directions before given for Nantasket Roads, in Daytime, with favorable winds and fair weather, when the eye, assisted by the compass, is pilot.

Bring Boston Lighthouse to bear **NE.** by **E.** $\frac{3}{4}$ **E.**, on which bearing keep it, and run **SW.** by **W.** $\frac{3}{4}$ **W.** until you open the Passage called Nantasket Gut; * then run through this Passage, keeping nearest Windmill Point, which is bold, and is left on the Port hand. When abreast of this Point, make good the course **S.** by **E.** $\frac{1}{2}$ **E.** to Black Buoy No. 1, off Bumkin Island Shoal, which you will leave about 75 yards on the Port hand. From this Buoy steer **SE.** by **S.** $\frac{1}{2}$ **S.**, leaving Bumkin Island (the Western point of which is quite bold) about 150 yards to the Eastward. When abreast of this Island you will see nearly ahead two Buoys, one Black, the other Red; leave the Red Buoy No. 2 about 20 yards to the Westward, and run **S.** $\frac{1}{2}$ **W.** about $\frac{1}{4}$ mile; then **S.** by **E.** $\frac{3}{4}$ **E.**, for Crow Point Wharf (distance about $\frac{1}{2}$ mile), which is left about 150 yards to the Westward. When abreast of this wharf, you will see nearly ahead a Black Buoy No. 3, which lies on the West side of Channel Rock. Run for this Buoy, bearing **S.** by **E.** $\frac{3}{4}$ **E.**, and haul round it at a distance of 50 yards, leaving it on the Port hand; then run **E.** $\frac{1}{4}$ **S.** about $\frac{1}{8}$ mile, and anchor between Chandler's and Sailor's Islands in from $2\frac{1}{2}$ to $3\frac{1}{2}$ fathoms at Low Tide. About 12 feet water can be carried at Low Tide from Bumkin Island to this anchorage. From this point to the town, it is recommended for strangers to take pilots, as the Channel is both narrow and crooked. The Channel is to the Eastward of Sailor's Island, and about 8 feet water at this date (1878) can be carried at Low Tide to the first wharf.†

* The passage between Peddock's Island on the West and Windmill Point on the East, is called Nantasket Gut. The entrance to this Gut bears South from George's Island; distance about one mile.

† In entering Hingham Harbor, three small Islands will be seen lying apparently in the middle of the passage. The most Northerly of these is called Chandler's Island, the most Westerly Ragged Island, and the most Easterly Sailor's Island.

Quincy or Weymouth.

Sailing Directions for approaching and entering Weymouth Fore River in Daytime, with favorable Winds and fair weather.

After passing through Nantasket Gut, according to directions before given for Hingham Harbor, bring Windmill Point (which is on the Eastern side of the Gut) to bear **NE.** by **N.** $\frac{1}{2}$ **N.**, on which bearing keep it, and run **SW.** by **S.** $\frac{1}{2}$ **S.**, until Pig Rock Beacon bears **SW.** by **W.**; then run directly for it on this course, until midway between Prince Head on the Starboard, and Sheep Island* on your Port hand; then run for the Western part of Grape Island (which is quite high), bearing **S.** $\frac{1}{2}$ **E.** On this last course Pig Rock Beacon will be left about $\frac{2}{3}$ mile to the Westward, and Sheep Island about $\frac{1}{3}$ mile to the Eastward. Continue the course **S.** $\frac{1}{2}$ **E.** for the Western part of Grape Island, until the Western part of Sheep Island bears **NE.** $\frac{1}{2}$ **N.**, on which bearing keep it, and run **SW.** $\frac{1}{2}$ **S.** until you make three Buoys, which lie off to the Northward of Weymouth Great Hill. The first of these Buoys is No. 1, Black, and lies off the Northwest side of Jackknife Ledge; the second is Red, No. 2, and lies on the West side of the Channel; the third is Red and Black, horizontal-striped, and lies upon a large rock which is on the West side of the Channel. The Black Buoy is left on the Port, the others on the Starboard hand. After passing these Buoys, a pilot is necessary, as the river is both narrow and crooked. If the wind should not be strong enough to sail against the current through Nantasket Gut, bring the South part of George's Island to bear **NE.** $\frac{1}{2}$ **E.**, on which bearing keep it, and run **SW.** $\frac{1}{2}$ **W.**, which will take you between the Northwest point of Peddock's Island and Sunken Ledge Beacon. As you sail in on this course **SW.** $\frac{1}{2}$ **W.**, you will see a Red Buoy, No. 4, which lies off the Northeast side of a rock. When this Buoy bears **SW.** by **S.** $\frac{1}{2}$ **S.**, run for it, leaving it about 20 yards to the Westward, and steer **SE.** by **E.** $\frac{1}{2}$ **E.**, leaving Pig Rock Beacon 250 yards to the Southward. When the Western part of Grape Island bears **S.** $\frac{1}{2}$ **E.**, the courses are as before given.

* This is a small island bearing **E.** $\frac{1}{2}$ **S.** from Pig Rock Beacon; distance about $\frac{1}{2}$ mile. At low tide, vessels of 10 feet draught may approach its western part as near as $\frac{1}{2}$ mile.

At Low Tide, vessels of not more than 8 feet draught, from the city or Broad Sound, bound to Quincy or Weymouth, may leave Long Island Light about $\frac{1}{2}$ mile to the Eastward, and run **SW.** by **S.**, leaving the Black Buoy No. 1, on rock off Hotel Wharf, $\frac{1}{2}$ mile to the Eastward. As you sail between Long and Spectacle Islands, the Buoy No. 2, on Sculpin Ledge, will be seen nearly ahead. Bring this Buoy to bear **SW.** by **S.**, and run for it, leaving it on the Starboard hand about 20 yards, and steer for Moon Head, bearing **SW.** by **W.**, until the Southwest end of Long Island bears **E.** by **S.**; then run **SE.** by **S.** $\frac{1}{2}$ **S.**, passing midway between Hangman's Island and Sunken Ledge Beacon. After passing the Beacon, you will see the Red Buoy No. 4, which bring to bear **SE.** by **S.** $\frac{1}{2}$ **S.**, and steer for it, leaving it 20 yards to the Westward. From this last Buoy steer **SE.** by **E.** $\frac{1}{2}$ **E.**, leaving Pig Rock Beacon 250 yards to the Southward; then proceed according to directions before given.

Neponset River.

Vessels bound into this river, when about $\frac{1}{3}$ mile to the Northward of Spectacle Island, will see to the Southwestward, about $\frac{3}{4}$ mile distant, a Red Buoy,* No. 2. Bring this Buoy to bear **SW.** by **W.**, and run for it on this course, leaving it a short distance on the Starboard hand, and steer **W.** by **S.** $\frac{3}{4}$ **S.**, passing midway between two Buoys, one Red, the other Black. From this last-mentioned point the course is **SW.** $\frac{1}{2}$ **W.** to Red Buoy No. 6. When abreast of this Buoy (which is left on the Starboard hand), it is recommended to anchor and take a pilot, as the Channel above this is both narrow and crooked.

* This Buoy bears from the Northern part of Spectacle Island **W.**; distance $\frac{1}{4}$ mile. From NE. end of Thomson's Island, **N.** $\frac{1}{4}$ **W.**; distance $\frac{1}{2}$ mile.

Lynn Harbor.

This Harbor is between Boston Lighthouse and Nahant, or on the Northern side of what is called Broad Sound. Strangers in vessels of more than 7 feet draught should not attempt to enter this place without pilots, as the Channels are narrow, crooked, and shallow. With a good pilot, about 12 feet water (at this date, 1879,) can be carried to the city at High Water. With Northerly winds, it is usual for vessels to enter Boston Harbor and anchor in President Roads until the winds are favorable for entering this place.

Sailing Directions for approaching Lynn Harbor in Daytime, with favorable winds and fair weather.

Vessels from Cape Cod may bring Minot's Lighthouse to bear **SE.** by **S.** $\frac{3}{4}$ **S.**, and steer **NW.** by **N.** $\frac{3}{4}$ **N.** for Whistling Buoy off the Graves; distance $7\frac{3}{4}$ miles. Leave this Buoy a short distance to the Westward, and make good the course **NW.** for Bass Point.* When this point bears **NE.** by **E.**, distance $\frac{1}{2}$ mile, then wait for a pilot.

Vessels passing between Thatcher's Island and the Londoner, will, after leaving the latter, steer **SW.** $\frac{1}{2}$ **W.** until Nahant Head bears **W.**; then haul round it at a distance of $\frac{3}{4}$ mile, and wait for a pilot.

Strangers in vessels of not more than 7 feet draught may enter this Harbor at $\frac{3}{4}$ flood by the following directions:—Leave Bass Point (which is bold) $\frac{1}{4}$ mile to the Eastward, and run **NW.** by **N.** *As you sail in you will see two Buoys, one Black, the other Red.* The Red Buoy No. 2 lies off to the Southwestward of Lobster Rocks, which are bare at very Low Tides. The Black Buoy No. 1 lies to the Southward of White Rocks, which are awash at Low Tide. When this last-mentioned Black Buoy bears **N.NW.**, run for it, leaving it about 50 yards to the Westward. When abreast of it, steer **NE.**, leaving the Red Buoy No. 4, off Black Rocks, about 100 yards to the Eastward. From this last-mentioned Buoy make good the course **N.** by **E.** $\frac{1}{2}$ **E.** for the city. These

* The western part of Nahant is called Bass Point. Vessels may approach it as near as $\frac{1}{4}$ mile without danger.

courses into Lynn Harbor should not be attempted until after $\frac{3}{4}$ flood.

It is High Water in Lynn Harbor 17 minutes before it is at Boston; common tides rise about $9\frac{1}{2}$ feet. From Boston or President Roads bound to Lynn, see sailing directions for Broad Sound in Daytime.

Chelsea Creek and Saugus River.

Pine's Point, on the West side of the entrance to this River and Creek, bears about **N.NW.** from Bass Point, the Western part of Nahant, distance $1\frac{7}{8}$ mile. Strangers without a pilot in vessels of about 7 feet draught may, with favorable winds, at $\frac{3}{4}$ flood, enter as far as the mouths of this Creek and River.

Sailing Directions for Chelsea Creek and Saugus River, in Daytime, with favorable winds and fair weather.

From the Southward or Eastward, follow the directions for Lynn Harbor, and at $\frac{3}{4}$ flood leave Bass Point (which is bold) $\frac{1}{4}$ mile to the Eastward, and run **NW.** by **N.** On this course you will see the Red Buoy on Lobster Rocks, and also the Black Buoy No. 1, off White Rocks.* Leave this last Buoy 100 yards to the Eastward, and run **N. $\frac{1}{4}$ W.**, leaving the two Black Buoys, Nos. 3 and 5, about 75 yards to the Westward. From the last Buoy the course is **N.** by **E. $\frac{1}{4}$ E.** until the Black Buoy No. 7, off Pine's Point, at the entrance of the River, bears **N.** by **W.**; then run for it, leaving it a short distance to the Westward. From this last Buoy haul up **NW. $\frac{1}{2}$ W.**, leaving the Buoy No. 2, on Round Rock, 30 yards to the Eastward. When abreast of this Buoy, steer **W.NW.** until the draw in the Railroad Bridge bears **N.** by **W. $\frac{1}{2}$ W.**; then anchor a short distance from it. Above this no intelligible directions can be given. Strangers, therefore, should not attempt to go above this anchorage without a pilot. It is High Water at the mouth of Chelsea Creek and Saugus River 15 minutes before it is at Boston. Common tides rise about $9\frac{1}{2}$ feet.

* Bound into Lynn, the Black Buoy off White Rocks is left to the Westward. Bound into Saugus River, it is left to the Eastward.

Nahant Harbor.

Sailing Directions for Nahant Harbor in Daytime, with favorable winds and fair weather.

Run for the **SE.** part of Nahant (generally called Nahant Head), bearing **NE.** until you make the Spindle on Bass Rock,* and the Black Buoy No. 1 on Joe Beach Ledge. This Ledge has but 8 feet water upon it at Low Tide. Continue the course **NE.** until this Buoy bears **N. by W.**; then steer for it, leaving it about 100 feet to the Westward. On this course you will also leave Shag Rocks and Pea Island (which are both bold) a short distance to the Eastward. When abreast of the Buoy, run **N. by W.** about 150 yards, and anchor in about 2 fathoms water at Low Tide (which will be $3\frac{3}{4}$ fathoms at High Tide). This Harbor is exposed to Southerly winds.

Swampscott Harbor.

Seven-eighths of a mile **N.NE.** from the Eastern point of Nahant is a small rocky Island called Egg Rock. This Island is bold, and extends nearly East and West about $\frac{1}{8}$ mile, and is 60 feet in height. A Lighthouse has been erected upon its summit, which shows a Red Fixed Light, and is intended as a guide to Swampscott Harbor.

Sailing Directions for Swampscott Harbor in Daytime, and also at Night, when the Lights can be seen.

From Cape Cod, or the Southwestward, bring Egg Rock Light to bear **NW.** by **N.**, and run for it, leaving it about $\frac{1}{4}$ mile to the Westward. When abreast of the Light, run **N.NW.**, and anchor in from 5 to 7 fathoms water. At Night, run for the Light (as before given), until abreast of it; then haul round it to the West-

* This Rock is bare at half tide. There is a good channel between the Spindle on this rock and the Buoy on Joe Beach Ledge. Entering by this passage, do not approach nearer to the Spindle than 125 yards, and nearer than 75 yards to the Buoy.

ward at a distance of $\frac{1}{2}$ mile from it, until it bears **S.** by **E.** $\frac{3}{4}$ **E.**; then run **N.** by **W.** $\frac{3}{4}$ **W.**, and anchor as before directed.

From the Northeastward, after passing between Thatcher's Island and the Londoner, make good the course **SW.** $\frac{3}{4}$ **W.** until Egg Rock Lighthouse bears **W.** by **S.**; then run for it on this course. If there be no error in the compass, Halfway Rock will be left $1\frac{1}{2}$ mile to the Northward, and the Buoys off Great Pig Rocks $\frac{3}{4}$ mile to the Northward. When the Spindle on Dread Ledge* bears **NW.** by **W.** $\frac{1}{2}$ **W.**, steer **W.** $\frac{1}{2}$ **N.**, leaving it about $\frac{1}{2}$ mile to Northward, and anchor in from 5 to 7 fathoms water. At Night, when Thatcher's Island Lights bear **W. NW.**, distance about 3 miles, make good the course **SW.** by **W.**, and as soon as the Red Light upon Egg Rock is made, bring it to bear West, and run for it on this bearing, leaving it $\frac{1}{2}$ mile to the Southward. When the Light bears **S.** by **E.** $\frac{1}{2}$ **E.**, run **N.** by **W.** $\frac{1}{2}$ **W.**, and anchor as before directed. In coming from sea, Egg Rock Light may be safely run for on any bearing from **W.** $\frac{1}{2}$ **S.** to **NW.** The Rock called the Roaring Bull is awash at Low Water, and is marked with a Red Buoy, No. 2. This Buoy bears from Marblehead Light **S.** by **W.** $\frac{1}{2}$ **W.**, distance $1\frac{3}{4}$ mile; from South part of Tinker's Island **SW.** by **S.**, distance $\frac{1}{6}$ mile. Vessels from the Eastward bound to Swampscott or the Westward may leave the Buoy on the Roaring Bull about $\frac{1}{8}$ mile to the Northward, and run **NW.** until it bears **NE.** by **E.** $\frac{3}{4}$ **E.**, on which bearing keep it, and run **SW.** by **W.** $\frac{3}{4}$ **W.** On this course the Great Pig Rocks (which are above water), Outer Breaker, Southern Shoal, and Southwest Breaker, will be left to the Southward; Middle Breaker, Dolphin Rock, Sammy's Rock, Ram Island, and Little Pig Rock, to the Northward. After passing these Rocks,† continue the course **SW.** by **W.** $\frac{3}{4}$ **W.**, until the Spindle on Dread Ledge bears **NW.** by **W.** $\frac{1}{2}$ **W.**; then proceed and anchor as before directed.

Swampscott Harbor is exposed to winds from **S.** to **E. NE.**

* This Ledge extends from Philips' Point, and is marked on its Southern part with a Spindle, which bears from Egg Rock Lighthouse **N.** by **E.** $\frac{1}{4}$ **E.**; distance $1\frac{1}{2}$ mile.

† The passage between these Rocks is about $\frac{1}{4}$ mile in width.

Marblehead Harbor.*

Dangers in entering this Harbor.

Halfway Rock.

This Rock is about 40 feet high, and very bold. Upon its summit there was formerly a Beacon; but all of this is now gone at this time, except the foundation, which shows as a white boulder on the top of it. It bears from Marblehead Light **E.** by **S.** $\frac{1}{2}$ **S.**, distance $2\frac{3}{8}$ miles.

Roaring Bull,

Which is awash at Low Tide, bears **S.** by **W.** $\frac{1}{2}$ **W.** from Marblehead Light, distance $1\frac{3}{8}$ mile. In going in, the Red Buoy No. 2 off this Rock is left to the Westward.

Tom Moore's Rocks.

These Rocks, which are bare at about $\frac{1}{3}$ ebb, are marked off their Eastern part with a Black Buoy No. 1, which bears from Marblehead Light **S.** $\frac{1}{2}$ **E.** about $\frac{3}{8}$ mile. Bound in, this Buoy is left to the Westward.

Marblehead Rock.

This Rock, which is high out of water, is marked with a Beacon, which bears from Marblehead Light **SE.** by **E.**, distance $\frac{3}{8}$ mile. It is bold on its Northern and Eastern sides. There is a Channel of 5 fathoms water between it and the shore.

Lasque's Ledge, called by some Half-Tide Rocks.

This is a Rocky Shoal, extending off to the Northeastward from Marblehead Light. At Low Tide, the Rocks are bare 160 yards from the shore. The Northeast end of the Ledge is marked with a Black Buoy No. 3, which bears from Marblehead Light **E.** $\frac{1}{2}$ **N.**, distance about $\frac{1}{3}$ mile. In passing in, this Buoy is left on the Port hand.

Gordon's Rock,

Which lies off 70 yards to the Northward of Marblehead Point, has 7 feet water upon it at Low Tide. It is marked with a Black

* South side of entrance to Marblehead Harbor is a Lighthouse which shows a fixed White Light.

Buoy No. 5, which bears from Marblehead Light **N.** by **E.** $\frac{1}{4}$ **E.**, distance about 150 yards. In passing in, this Buoy is left to the Southward.

Boden's Rock,

Which lies off the Eastern shore of the Harbor, has 8 feet water upon it at Low Tide. It is marked with a Black Buoy No. 7, which bears from the light **W.SW.**, distance about $\frac{1}{2}$ mile.

Sailing Directions for Marblehead Harbor in Day-time, with favorable winds and fair weather.

The course from Cape Cod Highland Light to Marblehead Light, at this date, (1878,) is **NW.** $\frac{1}{2}$ **N.**, distance $44\frac{1}{2}$ miles. Vessels, therefore, from the Southward bound to Marblehead will bring Cape Cod (Highland Light) to bear **SE.** $\frac{1}{2}$ **S.**, and make good the course **NW.** $\frac{1}{2}$ **N.** As soon as Marblehead Lighthouse is made, bring it to bear **NW.** $\frac{1}{2}$ **N.**, and run for it on this course. As you sail in, you will see on the Starboard bow what appears to be two small high rocky Islands, which are connected at Low Water. This is called Marblehead Rock. On the top of the Northeastern part of this Rock a Beacon has been built, which is painted Black and White in Horizontal stripes. This Beacon must be left $\frac{1}{3}$ mile to the Westward. When abreast of it, you will see about $\frac{1}{3}$ mile to the Northwestward a Black Buoy, which must also be left to the Westward. From this Buoy run **NW.** until you open the Harbor; then run in, passing midway between Fort Sewall and the Lighthouse, and run up about **SW.** by **W.**, and anchor off the town in from $3\frac{1}{2}$ to 4 fathoms at Low Tide.

From Boston by Main Ship Channel or Broad Sound, bring the Whistling Buoy off the Graves to bear **SW.** by **S.** $\frac{1}{4}$ **S.**, and run **NE.** by **N.** $\frac{1}{4}$ **N.** for Baker's Island Lights, distant $10\frac{1}{2}$ miles. On this course the Buoy off Southern Shoal (Great Pig Rocks) will be left $\frac{3}{4}$ mile to the Northwestward. As soon as Baker's Island Lighthouses are made, bring them to bear **NE.** by **N.**, on which bearing keep them, and run for them. On this course the Roaring Bull will be left about $\frac{3}{4}$ mile to the Westward. Continue the course **NE.** by **N.** for the Lighthouses, until Marblehead Light bears **NW.** $\frac{1}{2}$ **N.**; then run in according to directions before given.

From the Eastward, after passing between Thatcher's Island and the Londoner, steer **SW.** by **W.** until you make Halfway Rock,

by **E.** $\frac{1}{4}$ **E.**,
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(Rocks) will
Baker's Island
N., on which
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Continue the
Marblehead Light
directions before

s Island and
Halfway Rock,

which must be brought to bear **W.** in order to clear the outer Breakers. The Southern part of these Breakers are marked with a Red Buoy, No. 2, Halfway Rock bears **SW.** by **W.** from this Buoy, distance $\frac{7}{8}$ mile; Marblehead Light **W.** $\frac{1}{2}$ **N.**, distance $3\frac{1}{4}$ miles; Baker's Island Lights **NW.** by **N.** $\frac{3}{4}$ **N.**, distance $1\frac{1}{8}$ miles. Leave Halfway Rock 150 yards on either side, and run for Marblehead Light, bearing **W.** by **N.** $\frac{1}{4}$ **N.** until Marblehead Rock bears **SW.**; then proceed according to directions before given.

From the eastward, with Northerly winds, vessels may enter Marblehead Harbor by the following directions: When Baker's Island Lighthouses bear **W.** by **N.** $\frac{1}{2}$ **N.**, run for them on this course, leaving the Black Buoy No. 5 off to the Northwest of them, about 150 yards to the Southward. As you sail in on this course (**W.** by **N.** $\frac{1}{2}$ **N.**), you will see to the Southward the Black Buoy and Beacon on Hardy's Rocks, and the Horizontal-striped Buoy on House Ledge. After passing these, you will see the Beacon * on Bowditch's Ledge (which may be left 150 yards on either hand). After passing this last-mentioned Beacon a short distance, bring it to bear **NE.** $\frac{1}{2}$ **E.**, on which bearing keep it and run **SW.** $\frac{1}{2}$ **W.**, until the Red Buoy No. 6, which lies off Northwest from Eagle Island, is in range with Baker's Island Lights, bearing **E.** $\frac{1}{4}$ **N.**, then steer directly for Marblehead Lighthouse, bearing **SW.** by **S.** $\frac{1}{2}$ **S.** On this course you will pass between Gray's Rock † and the Horizontal-striped Buoy on Chappel Ledge; this ledge lies in Mid-channel, and is not dangerous for small vessels, as not less than 14 feet water has been found upon it up to this date. Continue the course for the Light until you open the harbor, then run in about **SW.** $\frac{1}{2}$ **W.** and anchor off the town.

Sailing Directions for Marblehead Harbor in the Night-time, with favorable winds and fair weather.

From the Southward run **NW.** $\frac{1}{2}$ **N.** from Highland Light, Cape Cod, and as soon as Baker's Island Lights are made, bring

* The Beacon on Bowditch's Ledge is painted Black, and bears **W.NW.** from Baker's Island Lights; distance $1\frac{1}{8}$ mile. The Ledge has but little water upon it at low tide.

† Gray's Rock is a small rocky Island. Marblehead Light bears from this Rock **S.** by **W.** $\frac{3}{4}$ **W.**; distance about $\frac{7}{8}$ mile. Its Northeastern part may be approached as near as 125 yards, without danger.

them to bear **NE.** by **N. $\frac{1}{2}$ N.**, and run for them on this course until Marblehead Light bears **W.NW.**, on which bearing keep it, and steer directly for it. On this last course Marblehead Rock will be left 150 yards to the Southward. Keep a sharp lookout for the rock, and when it bears **SW.**, run **NW. $\frac{1}{2}$ N.** On this last course, the Buoy of Lasque's Ledge will be left about 75 yards to the Southwest; continue the course **NW. $\frac{1}{2}$ N.**, until Marblehead Light bears **S.** by **W.**, then run **SW. $\frac{1}{2}$ W.** into the harbor, and anchor off the town in from $3\frac{1}{2}$ to $4\frac{1}{2}$ fathoms water at low tide. If the darkness be so great that Marblehead Rock cannot be seen from 100 to 200 yards, run for the Light bearing **W.NW.** under short sail, until you judge you are about $\frac{1}{2}$ mile from it, then steer **NW. $\frac{1}{2}$ N.** until the light bears **W. $\frac{1}{2}$ S.**, then haul round it and pass the Lighthouse point in not less than 5 fathoms water; when the light bears **E.** by **N.**, anchor in about $4\frac{1}{2}$ fathoms water at low tide.

***From Boston by Main Ship Channel, passing
South of the Graves.***

When abreast of the Whistling Buoy off the Graves, run **NE.** by **N.**, and as soon as Baker's Island Lights are made bring them to bear **NE.** by **N. $\frac{1}{2}$ N.**, on which bearing keep them, and run for them until Marblehead Light bears **W.NW.**, when the courses are as before given.

***From Boston, by way of Broad Sound, passing
North of the Graves.***

When abreast of Whistling Buoy, run **NE.** until Baker's Island Lights are made, then bring them to bear **NE.** by **N. $\frac{1}{2}$ N.**, on which bearing keep them, and run for them until Marblehead Light bears **W.NW.**; then run in according to directions before given.

From the Eastward, when Thatcher's Island Lights bear **W.NW.**, 3 or 4 miles distance, run **SW.** by **W. $\frac{1}{2}$ W.** until Marblehead Light bears **W.NW.**; on which bearing keep it until run for it. If there be no error in the compass on this last course, Half-way Rock will be left $\frac{1}{3}$ mile to the Northward; it is, however, advisable, in a dark night, to keep a sharp lookout for this rock, which is bold. When Marblehead Rock bears **SW.**, run in according to directions before given. In beating into Marblehead Harbor the Light may be brought to bear from **N.NW.** to **W.NW.**, until up with Marblehead Rock. This harbor is exposed to **NE.** winds.

Salem Harbor.

Baker's Island Lights.

Upon this Island there are two Fixed Lights, which are intended as guides to Salem, Manchester, and Beverly Harbors. These Lighthouses are 40 feet apart, and bear **SE.** and **NW.** from each other. The Southern light is the highest.

Hospital Point Light.

This is a Fixed White Light, and is intended as a guide to Salem Harbor: it is so arranged that it shows much brighter when a vessel is in Mid-channel.

Fort Pickering and Derby Wharf Range Lights.

On a bare Rock, on the North side of the harbor, $\frac{3}{4}$ mile East from the city of Salem, is erected a Lighthouse or Tower, which shows a Fixed White Light; and also upon Derby's Wharf is a Lighthouse which shows a Red Fixed Light. These two lights form a range to enter the harbor.

Dangers in entering Salem Harbor.

In entering this harbor there are many dangers, but we shall only describe those lying upon the sides of the Main Ship Channel.

Outer (or Southeast) Breakers.

This Ledge, upon which there are not more than 3 or 4 feet of water at low tide, is marked upon its Southern part with a Red Buoy No. 2; Baker's Island Lights bear from this Buoy **NW.** by **N.** $\frac{3}{4}$ **N.**, distance $1\frac{7}{8}$ miles; Halfway Rock **SW.** by **W.**, distance $\frac{7}{8}$ mile. There are many dangers between this Buoy and Baker's Island; strangers, therefore, should not attempt to pass between them. 10 fathoms water was found 200 yards in an Easterly direction from the rocks; the lead, therefore, gives but little warning in approaching it.

Middle Breakers.

These rocks, which are dry at low tide, are marked, off their Northeast part, with a Black Buoy, No. 1; Baker's Island Lights bear from this buoy **NW.** by **N.**; distance $1\frac{1}{3}$ miles. 10 fath-

oms water was found 200 yards in a Southeasterly direction from these rocks; in approaching them from the southeast, the lead, therefore, gives but little warning. Bound in, the Buoy on these rocks is left to the Westward.

Searl's Rock.

This rock, upon which there are about 5 feet water at Low Tide, is marked, off its Northeast part, with a Black Buoy, No. 3. Baker's Island Lights bear from this Buoy **NW.**; distance about $\frac{1}{2}$ mile. A little west of a line drawn from Searl's Rock to the Middle Breakers is an extensive Shoal, called the "Inner Breaker." Vessels should not approach nearer than 6 fathoms to this shoal. In sailing into Salem by Ship Channel, this buoy is left to the Westward.

Gale's Ledge.

This is a very dangerous Ledge, having but 2 or 3 feet water upon it at very Low Tides. It is marked off its South side with a Red Buoy, No. 2. Baker's Island Lights bear from this Buoy **SW.** by **W.** $\frac{1}{4}$ **W.**; distance $1\frac{1}{4}$ miles. 10 fathoms water was found $\frac{1}{6}$ mile **E.SE.** from this Ledge. Bound into Salem by way of the Main Ship Channel, this Buoy is left to the Northward.

Pilgrim Ledge.

About $\frac{1}{4}$ mile to the Westward of Gale's Ledge is Pilgrim Ledge, which has 19 feet water upon it at Low tide. Baker's Island Lights bear from this Ledge **SW.** $\frac{3}{4}$ **W.**; distance about 1 mile.

Whale's Back.

This Ledge is dry at $\frac{3}{4}$ ebb, and lies in the passage from Baker's Island to Manchester; its centre is marked with a Red Spindle. Baker's Island Lights bear from this Spindle **S.** by **W.** $\frac{1}{4}$ **W.**; distance about $\frac{3}{5}$ mile.

Little Misery Island.

Baker's Island Lights bear from the Southern point of this island **SE.** $\frac{1}{2}$ **S.**; distance about $\frac{3}{4}$ mile. The South point of the island is bold, and vessels may approach as near to it as 100 yards without danger. The Main Ship Channel is between this and Baker's Island.

Misery Ledge.

This is a small Rock, having about 8 feet water upon it at Low Tide. It is marked with a Buoy having Red and Black Horizontal Stripes. Baker's Island Lights bear from this buoy **SE.** by **E.**; distance $1\frac{1}{2}$ miles. Going in, this Buoy is left to the Northward. The Main Ship Channel passes between this Buoy and Bowditch's Ledge.

John's Ledge.

About $\frac{1}{2}$ mile to the Westward of Misery Ledge will be seen another Buoy having Red and Black Horizontal Stripes; this is on John's Ledge, a small rock having 8 feet water upon it at Low Tide. Baker's Island Lights bear from this Buoy **SE.** by **E.** $\frac{1}{4}$ **E.**; distance $1\frac{1}{3}$ miles. In going into Salem or Beverly by Main Ship Channel, Gale's Ledge, Pilgrim Ledge, Whale's Back, Little Misery Island, Misery Ledge, and John's Ledge, are all left to the Northward.

Baker's Island Shoal.

The Rocky Shoal extending off Northwest from Baker's Island is marked on its Northern part with a Black Buoy, No. 5. Baker's Island Lights bear from this buoy **SE.** by **S.** $\frac{1}{2}$ **S.**; distance $\frac{1}{2}$ mile.

Hardy's Rocks.

These Rocks are bare at half tide, and are marked with a Beacon painted Black, and also off their Northern part with a Black Buoy, No. 7. Baker's Island Lights bear from this Buoy **E.** by **S.** $\frac{3}{4}$ **S.**; distance $\frac{1}{2}$ mile. In passing in, this Buoy is left to the Southward.

House Ledge.

In sailing in, a Buoy will be seen a short distance to the Northwest of Hardy's Rocks Beacon, having Red and Black Horizontal Stripes. This is on House Ledge, which is a small rock having 8 feet water upon it at Low Tide. Baker's Island Lights bear from this Buoy **SE.** by **E.** $\frac{1}{2}$ **E.**; distance $\frac{3}{4}$ mile. This Buoy is left to the Southward in going into Salem Harbor.

Bowditch's Ledge.

After passing the Horizontal-striped Buoy on House Ledge, the next Beacon, with Cage on its top, painted Black,

is on Bowditch's Ledge, which has but little water on it at Low Tide. Baker's Island Lights bear from this Beacon **E. SE.**; distance $1\frac{1}{8}$ miles. Bound into Salem or Beverly, Hardy's Rocks, House Ledge, and Bowditch's Ledge are all left to the Southward.

Little Haste Rock and Shoal.

When abreast of the Beacon on Bowditch's Ledge, you will see, about $1\frac{1}{2}$ miles distant on the Port bow, a spar painted Black, with a Cask on its top. This Beacon is on Little Haste Rock, which is dry at low water. About **N. NW.** from the Beacon on the point of the Shoal extending from Little Haste Rock, is placed in 16 feet water, a Black Buoy, No. 13. Bowditch's Ledge Beacon bears from this buoy **E. $\frac{1}{2}$ S.**; distance about $1\frac{1}{2}$ miles. Baker's Island Lights **E.** by **S. $\frac{1}{4}$ S.**; distance $2\frac{1}{2}$ miles. Bound in, this buoy is left to the Southward.

Middle Ground.

When abreast of the Black Buoy No. 15, on Haste Shoal, there will be seen, about $\frac{3}{4}$ mile to the Southwest, a Black Buoy, No. 15; this is on the Northwest side of the Middle Ground. Fort Pickering Lighthouse bears from this buoy **W.** by **S. $\frac{1}{2}$ S.**; distance $\frac{1}{2}$ mile.

Great Aqua Vitæ.

When abreast of the Black Buoy off Middle Ground, about $\frac{1}{4}$ mile to the Southward, you will see a Black Beacon surmounted with wooden Staff and Cage. This is on a large bed of Rocks called "Great Aqua Vitæ," which are dry at $\frac{1}{3}$ ebb. Fort Pickering Lighthouse bears from this Beacon **W.** by **N. $\frac{1}{2}$ N.**; distance a little more than $\frac{1}{2}$ mile. About **W.** by **S. $\frac{1}{2}$ S.**, 200 yards from the Beacon, will be seen a Red Buoy, No. 10, which lies off South from Knapp's Rock, which has 7 feet water upon it at Low Tide. Bound into Salem by Main Ship Channel, the Beacon and Buoy on Haste Rock and Shoal, Buoy on Northwest part of Middle Ground, and Beacon on Great Aqua Vitæ, are all left to the Eastward.

Abbott's Rock.

NE. $\frac{1}{4}$ mile from Fort Pickering Lighthouse is a Monument painted Red, and surmounted with a wooden Staff with a Square

Cage on top. This Monument is built upon Abbott's Rock, which is bare at Low Tide.

Half Tide Rock.

After passing Fort Pickering Lighthouse, a short distance to the Southward, a Red Buoy, No. 12, will be seen, which lies near a rock called "Half-Tide Rock." This Rock is bare at very Low Tides. Bound into Salem Harbor, Abbott's Monument and Buoy off Half-Tide Rock are both left to the Westward.

Sailing Directions for Salem Harbor, by Main Ship Channel, in Daytime, with favorable winds and fair weather.

The course from Cape Cod Highland Light to Baker's Island Lights (at this date, 1878,) is **NW. $\frac{3}{4}$ N.**; distance $43\frac{3}{4}$ miles. Vessels, therefore, from the Southward, bound to Salem, will bring Cape Cod Highland Light to bear **SE. $\frac{3}{4}$ S.** and run **NW. $\frac{3}{4}$ N.** As soon as Baker's Island Lights are made, bring them to bear **NW. $\frac{1}{2}$ W.**, and run in, keeping them a little on the Port bow; if there is no error in the compass, the **SE.** and Outer Breakers, and also Searl's Rock, will all be left to the Westward. Give Baker's Island Lights a berth of $\frac{1}{4}$ mile, leaving them to the Southward, and run for the Lighthouse on Hospital Point, bearing about **W. by N. $\frac{3}{4}$ N.** On this course the Black Buoy No. 5, off Northwest part of Baker's Island; Black Buoy No. 7, off Hardy's Rocks; Horizontal-striped Buoy off House Ledge; and Black Beacon on Bowditch's Ledge, will all be left to the Southward. Little Misery Island, Horizontal-striped Buoy off Misery Ledge; and Horizontal-striped Buoy off John's Ledge, will all be left to the Northward. When midway between Misery Ledge and Beacon on Bowditch's Ledge* (which has a Cage on its top painted Black), run about **W. $\frac{1}{4}$ N.**; as you sail in, you will see, on the Port bow, the beacon on Little Haste Rock. (See description of this Beacon, and also the Black Buoy off Haste Shoal.) Leave this last-mentioned Buoy about 200 yards to the Eastward, and run in about **SW. by W.**, leaving the Black Buoy off Northwest part of Middle Ground, Beacon on Great Aqua Vitæ Rocks, and Red Buoy off Knapp's Rock, all to the Eastward. Abbott's Monu-

* Between Bowditch's and Misery Ledges the channel is but $\frac{1}{4}$ mile in width.

ment, Fort Pickering Lighthouse, and Red Buoy off Half-tide Rock, all to the Westward. When Derby Wharf Light bears west, anchor in soft bottom, in from 3 to $3\frac{1}{2}$ fathoms at Low Tide.

From Boston by Main Ship Channel, or Broad Sound.

Bring the Whistling Buoy off the Graves to bear **SW. $\frac{1}{2}$ S.**, and make good the course **NE. $\frac{1}{2}$ N.**, leaving Halfway Rock and Buoy on **SE. Breaker**, a short distance to the Northward. When Baker's Island Lights bear **NW. $\frac{1}{2}$ W.**, run in as before directed.

From the Eastward.

After passing between Thatcher's Island Lights and the Londoner, steer **SW. by W.** until Baker's Island Lights bear **W. by N.**, then run for them, leaving them $\frac{1}{4}$ mile to the Southward, and proceed according to directions before given.

Sailing Directions for Salem Harbor by Main Ship Channel, at Night-time, with favorable Winds and fair weather.

From the Southward make good the course **NW. $\frac{3}{4}$ N.** from Cape Cod Highland Light, and as soon as Baker's Island Lights are made, bring them to bear **W.NW.**, and run for them with the low light open to the Eastward of the high light. Give Baker's Island a berth of $\frac{1}{4}$ mile, leaving it to the Southward, and bring Hospital Point Light * to bear from **W. by N. $\frac{1}{2}$ N.** to **W. by N. $\frac{3}{4}$ N.**; on which bearing keep it, and run for it until the White Light on Fort Pickering and the Red Light on Derby's Wharf are in range, bearing **SW. by W. $\frac{3}{4}$ W.**; then run for them on this range until the Light upon Hospital Point bears **N. by E.**; then steer **SW. $\frac{3}{4}$ W.** into the harbor. When the Red Light on Derby's Wharf bears **W.**, then anchor in soft bottom in from 3 to $3\frac{1}{2}$ fathoms water at Low Tide. On this last

* The ship channel into Salem Harbor is between Bowditch's Ledge and Misery Ledge; the distance between these dangers is but $\frac{1}{4}$ mile. In order, therefore, to guide vessels safely at night, the Light upon Hospital Point is so arranged that it shows brightest when in mid-channel; it is therefore highly necessary in sailing in to keep a sharp lookout for this light, and steer for it when it shows brightest, as $\frac{1}{4}$ point error in the compass in sailing through this narrow passage may lead to difficulty.

course into the harbor it is recommended to use the lead and not go into less than four fathoms water at Low Tide, until the White range Light at Fort Pickering bears **N.NE.**

From Boston by way of Main Ship Channel or Broad Sound.

Bring the Whistling Buoy off the Graves to bear **SW. $\frac{1}{2}$ W.**, and make good the course **NE. $\frac{1}{2}$ E.**, until Baker's Island Lights bear **W.NW.**; then run in as before directed.

From the Eastward.

When Thatcher's Island Lights bear **W. NW.**, 3 or 4 miles distant, run **SW.** by **W.** until Baker's Island Lights bear **W.** by **N.**; then run for them and enter according to directions before given.

Thick Weather.

At this date (1878) a Fog Bell is placed near Baker's Island Lights, which is struck during thick weather. 13 fathoms water was found **E.** by **S.** $\frac{1}{2}$ mile from the Southeast Breaker; 14 fathoms $\frac{1}{2}$ mile **SE.**; 13 fathoms 150 yards **SW.**; and 15 fathoms **W.NW.** $\frac{1}{4}$ mile from it. 14 fathoms water was found **E.** by **S.** $\frac{1}{4}$ mile from the Middle Breaker. In thick weather the Lead, therefore, gives but little warning in approaching these dangers.

Beating into Salem by Main Ship Channel.

In beating into Salem Harbor, if there is no error in your compass, Baker's Island Lights may be brought to bear from **NW. $\frac{1}{2}$ W.** to **W.** by **S.** without danger. Another sure guide is, in standing to the Westward, not to bring Baker's Island Lights in range, but keep the low light open to the Eastward of the high one.

Cat Island Channel.

From the Southward, in Daytime, with favorable winds and fair weather, vessels bound to Salem may safely pass through this Channel. As soon as Baker's Island Lights are made, bring them to bear **N.NE.**, and run for them on this course. As you sail in you will see Halfway Rock on the Starboard (see description of this Rock), and another small bare rock on the Port, with a Red Spindle with round Cage; this rock is called "Satan." Continue the course for the Lighthouses bearing **N. NE.**, until Halfway Rock bears **SE. $\frac{1}{2}$ E.**, on which bearing

keep it and steer **NW. $\frac{1}{2}$ W.** On this last course the bare rock called Satan, the Black Buoy No. 1, off Northeast from a large Island called "Cat Island," and the Horizontal-striped Buoy off Chapel's Ledge, will all be left to the Westward. The Horizontal-striped Buoy off Gooseberry Ledge, the Red Buoy No. 5, off the Brimbles, and the Red Buoy No. 4, off Mid-channel Rock, will all be left to the Eastward. Continue the course **NW. $\frac{1}{2}$ W.**, until the south point of Eagle Island * is in range with Baker's Island Lights, bearing **E. by N. $\frac{3}{4}$ N.**; you are then between the Horizontal-striped Buoy on Chappel's Ledge, and the Red Buoy No. 4 on Mid-channel Rock. From this point make good the course **N. by W. $\frac{3}{4}$ W.**, leaving three black buoys on the port, and one red buoy on the starboard. As you sail in on this course you will see on the port the Beacon on Little Haste Rock (as before described) and also the Black Buoy off Northwest from it. When this last-mentioned buoy bears **W. by N.**, run for it, leaving it 200 yards to the Southeastward, and run in **SW. by W.** in accordance with directions before given.

Gray's Rock Channel.

Vessels from the Southward bound to Salem may, in Daytime, with favorable winds and fair weather, safely run through this channel by the following directions. As soon as Baker's Island Lights are made bring them to bear **N.NE.**, and run for them until Marblehead Lighthouse bears **NW. by N.**; then run in **NW. by N. $\frac{3}{4}$ N.**, leaving Marblehead Rock (see description of this Rock) 200 yards to the Westward. Bring the beacon on this rock to bear **S. $\frac{1}{2}$ W.**; distance $\frac{1}{4}$ mile. On this bearing keep it, and steer **N. $\frac{1}{2}$ E.**, leaving Gray's Rock † $\frac{1}{8}$ mile to the Westward, and the Horizontal-striped Buoy on Chappel's Ledge $\frac{1}{8}$ mile to the Eastward. From Gray's Rock continue the course **N. $\frac{1}{2}$ E.**, leaving three Black Buoys to the Westward. As you pass in, you will see on the Port the Beacon on the Little Haste Rock (which is a spar 35 feet long, painted black, with a cask on its top), and also the Black Buoy off Northwest from it. When this last-mentioned Buoy bears **W. by N.**, run for it, leaving it 200 yards to the Southeast,

* This is a small bare island, extending NE. and SW. 200 yards; it bears N. by E. $\frac{1}{2}$ E., $\frac{1}{4}$ mile from the hotel on Cat Island.

† Gray's Rock is a small Rocky Island. Marblehead Light bears from this rock S. by W. $\frac{3}{4}$ W., distance about $\frac{3}{8}$ mile; its Northeastern part may be approached as near as 125 yards without danger.

and run in about **SW. by W.**, in accordance with directions before given.

High Water.

It is high water at Salem Harbor 16 minutes before it is at Boston; common tides rise from 9 to 10 feet.

Beverly Harbor.

Sailing Directions for Beverly Harbor in Daytime, with favorable winds and fair weather.

Follow the directions for Salem Harbor by either channel, night or day, until abreast of the Beacon on Little Haste Rock. (See description of this Beacon.) Bring the Beacon to bear **SE. by E. $\frac{1}{2}$ E.**, and steer **NW. by W. $\frac{1}{2}$ W.** As you sail in on this course, you will see on the Port bow a Black Buoy, No. 1, and Beacon; leave them both to the Southward, and haul round the Beacon at a distance of 75 yards from it, leaving it to the Eastward. When the Beacon bears East, 75 yards distant, you will see to the Southward two Red Buoys and a Beacon. The first Buoy, No. 4, is on the Middle-ground Ledge, and may be left 30 feet to the Westward; the second Buoy, No. 6,* lies off a shoal extending from Tuck's Point (Beverly), and may be left 25 yards to the Northwestward. The Beacon is on the East side of the Channel, and must be left to the Southeast. When abreast Buoy No. 6, you will see a Beacon bearing about **NW. by W.**; run for this last-mentioned Beacon, leaving it 100 yards on the port, and run for the Eastern part of the town, where, if you wish, you may anchor off the wharves in $3\frac{1}{4}$ fathoms water at low tide.

Danvers.

If bound to Danvers, it is advisable to take a pilot at Beverly.

* From Buoy No. 4 to No. 6 the Channel, especially at Low Tide, is very narrow; it is therefore advisable, in sailing in between these buoys, to use the lead, and not go into less than 4 fathoms water, until past Buoy No. 6.

Manchester Harbor.

Bound into Manchester, Great and Little Misery Islands, and Sauli's Rock, which is bare at Low Tide, are left to the Westward. Whale's Back, which is dry at $\frac{3}{4}$ Ebb; White Ledge, dry at Low Water; House and Ram Islands, are all left to the Eastward.

Sailing Directions for Manchester Harbor in Day-time, with favorable Winds and fair weather.

You may run for Baker's Island Lights with them bearing from NW. $\frac{1}{2}$ W. to W. by S.; give the Island a berth of $\frac{1}{4}$ mile, leaving it to the Southward; when abreast of the Lights, bring them to bear S. $\frac{1}{2}$ W., on which bearing keep them, and run N. $\frac{1}{2}$ E. As you sail in, you will see on the Starboard bow the Spindle on the Whale's Back; and the Red buoy No. 2, which lies off White Ledge: both of which are left to the Eastward. You will also see on the Port bow a Black Buoy, No. 1, on Sauli's Rock which is left to the Westward. Continue the course N. $\frac{1}{2}$ E. until the Northern part of Great Misery Island bears W.S.W.; then anchor in about $3\frac{1}{4}$ fathoms water at Low Tide, which will be 5 at High Water. If bound to Manchester, wait for High Water; and it is also advisable to take a pilot here. High Water at Manchester village about the same time as at Boston.

Gloucester Harbor.

Eastern Point Lighthouse.

This Lighthouse is on the Eastern side of the entrance to this harbor. At this date, 1879, it shows a fixed Red Light. A Fog Bell is placed near the Lighthouse.

Ten Pound Island Lighthouse.

N. by E., from Eastern Point Lighthouse, distance $1\frac{1}{4}$ miles, is a small Island called Ten Pound Island. Upon the Western part of this Island is a Lighthouse which, at this date, 1879, shows a fixed White Light.

Dangers entering this Harbor.****Eastern Point Ledge.***

This Ledge extends Southwesterly from the Lighthouse about $\frac{1}{4}$ mile; the least water upon it is on Webber's Rock, which has 7 feet at Low Tide. This rock is marked with a Red Buoy, No. 2, which is placed on the Southern side of it, and bears from the Lighthouse on Eastern Point SW. by S. about $\frac{1}{4}$ mile.

Dog Bar.

This Bar, which is dry in several places at Low Tide, extends from Eastern Point (a little North of the Lighthouse) about 400 yards in a Westerly direction; it is marked with a Red Buoy, No. 4, which bears from Eastern Point Light NW. by W. $\frac{3}{4}$ W.; distance $\frac{1}{6}$ mile. Large vessels of more than 16 feet draught passing in should, at Low Tide, leave this Buoy 300 yards to the Eastward.

Norman's Woe Rock.

This is a dry rock about 100 yards square, and lies near the Western shore. Vessels beating out or into the harbor should not approach nearer to it than $\frac{1}{4}$ mile, as a Ledge extends off about S.S.E. from it $\frac{1}{8}$ mile. Eastern Point Light bears from this Rock E. by S.; distance $1\frac{1}{4}$ miles.

Round Rock Shoal.

This is a Ledge extending nearly North and South 300 yards, and has, at very Low Tides, as little as 11 feet water upon it. A Black Buoy, No. 1, placed in $3\frac{1}{2}$ fathoms water, marks its Southern end. Eastern Point Light bears from this Buoy SE. by E. $\frac{3}{4}$ E.; distance $\frac{2}{3}$ mile. In passing in, this Buoy, which is nearly in the middle of the harbor, is left to the Westward. Between Round Rock Shoal and Dog Bar the channel is about $\frac{1}{4}$ mile in width, and has a depth of about $5\frac{1}{2}$ fathoms at Low Tide.

Field Rocks.

These are a group of Rocks lying near the Western shore, some of which are bare at Low Tide; they are marked upon their Southeast part with a Black Buoy, No. 3, which in passing in is left on

* Since this was written several of the Rocks in Gloucester Harbor have been removed.

the port hand. Ten Pound Island Light bears from this Buoy **E.** by **N.**; distance about $\frac{2}{3}$ mile.

Ten Pound Ledge.

On this Rock or Ledge, at very Low Tides, there are but 8 feet water; a Red Buoy, No. 6, is placed on the West side of it. Ten Pound Island Light bears from it **NE.** $\frac{1}{2}$ **E.**; distance $\frac{2}{3}$ mile. This Ledge lies nearly in midchannel, but the best water is between it and Field Rocks, the channel being nearly $\frac{1}{3}$ mile in width.

Babson's Ledge.

This Ledge, on which, at very Low Tides, there are but 9 feet water, is marked on its Southeast side with a Black Buoy, No. 5. Ten Pound Island Light bears from this Buoy **S.** $\frac{1}{2}$ **W.**; distance $\frac{1}{4}$ mile.

Black Rock.

This Rock, which is bare at Half Tide, lies about 150 yards from the Eastern shore, and is marked with a Spindle. Ten Pound Island Light bears from this Spindle **SW.**; distance about $\frac{1}{4}$ mile. The current of Ebb sets out of the harbor quite strong on to Black Rock, and vessels bound out or in with light winds must govern themselves accordingly.

Elisha's Ledge.

This Ledge, which is dry at Low Tide, lies near the shore on the Southern side of the harbor; it is marked with a Red Buoy, No. 8. This Buoy bears about **E.NE.** from the Spindle on Black Rock; distance $\frac{1}{4}$ mile.

Pinnacle Rock.

This Rock lies on the Northern side of the harbor, nearly opposite Elisha's Ledge; it has 9 feet water upon it at Low Tide, and is marked on its Southern part with a Black Buoy, No. 7, which bears about **E.** 300 yards from Fort Point Wharf.

Harbor Rock, or Spindle Rock.

NE., a little more than 100 yards from the Black Buoy, No. 7, off Pinnacle Rock, is a Spindle with an open-worked Ball on top;

Buoy **E.**

the Spindle and Ball are both painted Black. This Spindle is on Harbor Rock, which is bare at Half Tide.

Little Harbor Rock.

NE. by **E.**, about 100 yards from the Spindle on Harbor Rock, is a Black Buoy, No. 9, which lies off to the Southward of this Rock. Little Harbor Rock has about 6 feet water upon it at Low Tide.

Five Pound Island Ledge.

This Ledge, which is marked with a Spindle, is bare at Half Tide, and lies about 80 yards West from Five Pound Island.

Black Ledge,

which is bare at Low Tide, lies a short distance to the Eastward of Ten Pound Island; it is marked with a Red Buoy, which is placed a short distance Southwest from the Ledge. Vessels passing to the Eastward of Ten Pound Island should leave this Buoy about 30 feet to the Eastward. This passage is narrow, and about 8 feet water can be carried through it at Low Tide.

Clam Rock.

This Rock, which is dry at Low Tide, is marked on its Southern side with a Red Buoy, which bears **NW.** by **W.** $\frac{3}{4}$ **W.**; distant about 200 yards from the Black Buoy off Pinnacle Rock. Vessels bound to the Wharves in the Cove should leave this Buoy to the Northeastward.

Sailing Directions for Gloucester Harbor in Day-time, with favorable winds and fair weather.

The course (at this date, 1879) from Cape Cod Highland Light to Eastern Point Lighthouse is **NW.** by **N.** $\frac{1}{2}$ **N.**; distance 42 miles. Vessels, therefore, from the Southward will bring Cape Cod Highland Light to bear **SE.** by **S.** $\frac{1}{2}$ **S.**, and steer **NW.** by **N.** $\frac{1}{2}$ **N.** When Eastern Point Lighthouse is made, bring it to bear from **N.W.** to **NNE.**, and run for it. When about $\frac{1}{2}$ mile from the Lighthouse, you will see the two Red Buoys on Webber's Rock and Dog Bar; leave the Red Buoy, No. 4, on Dog Bar, about 300 yards on the Starboard, and steer **N.** by **E.** for the Red Buoy, No. 6, on Ten Pound Ledge. Leave this Buoy 50 feet to the Eastward, and continue the course **N.** by **E.** until Ten Pound Island Lighthouse bears **E.SE.**,

then run **E.NE.**, and anchor near the Black Buoy off Babson's Ledge, Ten Pound Island Lighthouse bearing about **S.SE.**; distance $\frac{1}{4}$ mile.

If bound into the Inner Harbor, leave the Black Buoy on Babson's Ledge (which bears **N. $\frac{1}{2}$ E.** $\frac{1}{4}$ mile from Ten Pound Island Lighthouse) to the Northward, and run in about **E.NE.**, keeping midway of the harbor, and leaving the Spindle, and Red Buoy on Black Rock, and Elisha's Ledge, to the Eastward. When Five Pound Island, which is small, and lies nearly in the middle of the harbor, bears **NE.**, 250 yards distant, then anchor in about 3 fathoms at Low Tide.

S. E. Harbor.

Leave the Red Buoy, No. 4, on Dog Bar (which bears **NW.** by **W. $\frac{3}{4}$ W.** from Eastern Point Lighthouse) about 100 yards to the Eastward, and run **N. $\frac{1}{2}$ E.** until Eastern Point Lighthouse bears **S. by E.**; then run **NE. by E.**, and anchor in about 5 fathoms water at Low Tide; Ten Pound Island Lighthouse bearing **N. by W. $\frac{1}{3}$ mile.**

From Boston.

Vessels from Boston, by way of Broad Sound, or Main Ship Channel, bound to Gloucester, may bring the Whistling Buoy off the Graves to bear **SW.**, and make good the course **NE.** When Eastern Point Lighthouse is made, bring it to bear **NE.**, and run for it until within $\frac{1}{2}$ mile from it, when the courses are as before given.

From the Eastward.

Vessels from the Eastward, passing between Thatcher's Island and the Londoner, may bring the Spindle on it to bear **NE.** by **E.**, and steer **SW. by W.** until Eastern Point Lighthouse bears **W.NW.**; then haul round it at a distance of $\frac{1}{2}$ mile, and proceed according to directions before given.

Sailing Directions for Gloucester Harbor, at Night-time, with favorable winds and fair weather.

From the Southward bring Cape Cod Highland Light to bear **SE. by S. $\frac{1}{2}$ S.**, and make good the course **NW. by N. $\frac{1}{2}$ N.** When Eastern Point Light is made, bring it to bear about **N.NW.**,

and run for it on this course. Leave this Light about $\frac{1}{2}$ mile to the Northeastward, and continue the course Northwesterly until Ten Pound Island Light bears **NE.** by **N.** $\frac{1}{4}$ **N.**; then run in on this bearing for it until Eastern Point Light bears **S.SE.**; then make good the course **N.** $\frac{3}{4}$ **E.** until Ten Pound Island Light bears **E.** by **S.**; then run **E.NE.** until Ten Pound Island Light bears **S.SE.**; then anchor. If bound into the Inner Harbor, or to the Wharves, wait at this anchorage until daylight; then proceed according to directions before given for daytime.

S. E. Harbor.

Run for Ten Pound Island Light, bearing **NE.** by **N.** $\frac{1}{4}$ **N.**, according to direction before given, until Eastern Point Light bears **S.SE.**; then steer **NE.** $\frac{1}{2}$ **E.** until Ten Pound Island Light bears **N.** by **W.**; then anchor in about 5 fathoms water at Low Tide. The Southeast Harbor is a good one to enter at night for vessels of more than 12 feet draught, especially at Low Tide.

From Boston.

From Boston, by the way of Broad Sound or Main Ship Channel, bring the Whistling Buoy off the Graves to bear **SW.** $\frac{1}{2}$ **W.**, and make good the course **NE.** $\frac{1}{2}$ **E.** until Eastern Point Light bears **NE.** by **N.**; then run for it until $\frac{1}{2}$ mile from the Light; then steer Northwesterly until Ten Pound Isl. Light bears **NE.** by **N.** $\frac{1}{4}$ **N.** The courses are then in accordance with directions before given.

From the Eastward.

From the Eastward bring Eastern Point Light to bear **W.**, and run for it; haul round the point at a distance of $\frac{1}{2}$ mile from the Light, and run Northwesterly until Ten Pound Island Light bears **NE.** by **N.** $\frac{1}{4}$ **N.**; then proceed according to directions before given.

Thick Weather.

At this date, 1879, there is placed near the Lighthouses at Thatcher's Island a Steam-Whistle, and Fog Bells have also been placed at Eastern Point and Baker's Island. The ear, assisted by the Lead and Compass, will therefore be the Pilot for vessels bound to Gloucester Harbor in thick weather.

High Water.

It is High Water at Gloucester Harbor 25 minutes before it is at Boston. Mean rise and fall of tides 9 feet.

Dangers in Sailing from Thatcher's Island to Boston.

The outermost dangers are the Londoner, Southeast or Outer Breaker off Baker's Island, Halfway Rock; off Baker's Island, Outer Breaker to the Southward of Marblehead Light, Graves, Martin's, and Boston Ledges; all of which have been previously described. (See Dangers in entering the different Harbors from Cape Ann to Boston.)

Depth of Water to avoid Dangers.

If a vessel should be compelled to haul off or lay by on account of thick weather, when running for Boston, Salem, Gloucester, or any of the harbors between Minot's Light and Thatcher's Island for safety, she should not approach nearer the coast than 20 fathoms water; if less than this is found, make good the course E. until it deepens to 20 fathoms. This depth will clear all dangers from rocks or shoals.

Thatcher's Island.

This Island extends SW. and NE. nearly $\frac{1}{2}$ mile in length, and a little more than 300 yards in breadth. Its highest part is about 50 feet above High-Water Mark, and is destitute of trees.

Thatcher's Island Lights and Fog Signals.

Upon the summit of this Island stand two lofty Towers (bearing from each other N. by E. $\frac{3}{4}$ E., and S. by W. $\frac{3}{4}$ W., distance 895 feet apart) which show fixed White Lights of the first order of Fresnel, elevated 165 feet above sea-level. A powerful Steam-Whistle is placed near the Lighthouses, giving each minute a blast of 8 seconds, and one of 4 seconds, with alternate intervals of 4 and 44 seconds.

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Bearings and Distances from Thatcher's Island Lighthouses.

		Distance.
Cape Cod (Highland Light),	S. by E. $\frac{3}{4}$ E.,	42½ miles nearly.
Race Point Light, . . .	S. by E. . . .	37½ "
Gurnet Lights (Plymouth),	S. by W. $\frac{1}{4}$ W.	38 "
Minot's Light,	SW. by S. . . .	24 "
Boston Light,	SW. $\frac{1}{4}$ W. . . .	23 "
Long Island Light, . . .	SW. $\frac{3}{4}$ W. . . .	25 "
Newburyport Lights, . .	NW. by N. . . .	14½ "
Isles of Shoals Light, . .	N. $\frac{1}{2}$ E. . . .	20 "
Boon Island Light, . . .	N.NE. . . .	29½ "
Cape Elizabeth Lights, . .	NE. by N. $\frac{1}{2}$ N.	58½ "
Seguin Light,	NE. $\frac{1}{4}$ N. . . .	74 "
Monhegan Light,	N E. $\frac{3}{4}$ E. . . .	87½ "
Mount Desert Rock Light,	E.NE. . . .	133 "
Cape Sable Light,	E. $\frac{3}{8}$ S. . . .	222 "

Bearings and Distances of Dangers from Thatcher's Island Lights.***The Londoner.***

This is a dangerous Ledge extending about NE. by N. and SW. by S. nearly $\frac{1}{2}$ mile. On its Southern end, which is the dry part, is placed an Iron Spindle 45 feet high, with an Octagonal Cage on top. This Spindle bears from Thatcher's Island, Northern Lighthouse, SE.; distance $\frac{1}{2}$ mile nearly. Between Thatcher's Island and the Londoner there is a Channel $\frac{1}{4}$ mile in width, having a depth of about 6 fathoms at Low Tide. The Eastern side of this Ledge, in thick weather, may be approached with the Lead without danger.

Oak Rock.

This Rock, which lies between Thatcher's Island and Cape Ann, is marked with a Red Buoy, No. 2, which bears W.NW. from the Northern Light upon Thatcher's Island; distance about $\frac{1}{2}$ mile.

Thatcher's Island Bar.

A Bar extends from Thatcher's Island to Milk Island, and vessels of more than seven feet draught should not attempt this passage at Low Tide.

Milk Island Bar.

The passage between Milk Island and the main land is only used by boats at Low Tide.

Dry Salvages.

Upon the highest part of the Dry Salvages is a Tripod, the top of which is 65 feet above High-Water Mark. About $\frac{1}{3}$ of the upper part of this Tripod is covered so as to present the appearance of a Pyramid, and is painted red. Thatcher's Island, Northern Light, bears from this Tripod **S. by W. $\frac{3}{4}$ W.**; distance 2 miles. This Ledge, including the bare and sunken Rocks, extends North and South about $\frac{1}{4}$ mile. Vessels, in thick weather, approaching this Ledge from the Eastward should proceed with caution, as 15 fathoms water was found East, $\frac{1}{4}$ mile from the Tripod, 13 fathoms South, $\frac{1}{4}$ mile, and 10 fathoms North, $\frac{1}{4}$ mile from it.

Little Salvages.

These Rocks, which are bare at Low Tide, lie about $\frac{1}{4}$ mile West from the Dry Salvages. Thatcher's Island, Northern Light, bears from this Reef **S. by W. $\frac{1}{4}$ W.** about two miles. The passage between the Dry and Little Salvages is 300 yards in width, but is not safe, as there is a rock lying in it. This rock bears about **NW.** from the Tripod, distance $\frac{1}{6}$ mile, and is bare at Low Spring Tides.

Rockport Harbor.***Straitsmouth Island Light.***

Upon the Northeast part of Straitsmouth Island * is a Lighthouse which shows a fixed White Light. This Lighthouse bears from the Northern Lighthouse upon Thatcher's Island **N. by W. $1\frac{1}{2}$ miles.**

Dangers in approaching Rockport Harbor.***Avery's Ledge.***

These are a sunken mass of Rocks about 200 yards square. Upon some of these rocks there are, at Low Tide, not more than

* There is not any passage for vessels between Straitsmouth Island and the main land.

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4 feet water. A Red Buoy, No. 2, marks the Southwestern part of the Ledge. Straitsmouth Island Light bears from this Buoy S. by W. $\frac{1}{4}$ W.; distance $\frac{1}{2}$ mile.

Dry Salvages.

Straitsmouth Island Light bears from the Tripod on the Dry Salvages W.SW.; distance $1\frac{1}{8}$ miles.

Little Salvages.

These Rocks, which are bare at Low Tide, lie about $\frac{1}{4}$ mile West from the Dry Salvages. Straitsmouth Island Light bears from the centre of this Reef SW. by W. about 1 mile. The passage between the Dry and Little Salvages is 300 yards in width, but strangers should not attempt it on account of a rock which lies nearly midway between the two Ledges, and is dry at very Low Tides.

The Flat Ground

Are three Ledges extending North and South about $\frac{1}{2}$ mile, and lie near each other. The Northernmost Ledge has 10 feet water upon it, the Middle Ledge 9 feet, and the Southernmost Rock is bare at very Low Tides. A Red Buoy, No. 2, is placed off to the Southward of this Rock. Straitsmouth Island Light bears from this Buoy SW. by S. $\frac{3}{4}$ S.; distance $\frac{7}{8}$ mile; Rockport Breakwater SW. by W. $\frac{3}{4}$ W. $1\frac{1}{2}$ miles. Vessels from seaward bound to Rockport generally pass about $\frac{1}{4}$ mile to the Northward of the Salvages, and a short distance South of this Buoy. At this date (1879) there is not any Buoy off the Northern part of the Flat Ground, and vessels from the Northward bound to any of the harbors in Sandy Bay should, in order to avoid this Ledge, keep not more than from $\frac{1}{2}$ to $\frac{3}{4}$ mile from the main land.

Nine-Foot Rock.

This Rock, which is not Buoyed (at this date, 1879), has 9 feet water upon it at very Low Tides. Straitsmouth Island Light bears from this Rock E.SE., distance about $\frac{1}{2}$ mile; Rockport Breakwater W. $\frac{1}{2}$ S., distance $\frac{1}{2}$ mile.

Sailing Directions for Rockport Harbor, in Daytime, with favorable winds and fair weather.

From the Southward, after passing Thatcher's Island and the Lodoner, bring Straitsmouth Island Lighthouse to bear NW. $\frac{1}{2}$ N.,

and run for it; give the Light a berth of about $\frac{1}{4}$ mile, leaving the Red Buoy No. 2, on Avery's Ledge, a short distance to the Northward, and run **W.** by **N.** until a large Granite Factory in the town bears **W.SW.**; then run in for it on this course, passing midway between the points of the harbor. If it be Low Tide, anchor, and wait until High Water; then run between the pier heads into the Basin, or Inner Harbor.

In running in **W.SW.** for the Stone Factory, the 9 foot Rock will be left 250 yards to the Southward. On this course, the Rock lying a short distance to the Eastward of the end of the Breakwater will be left to the Northward. This last-mentioned rock is nearly dry at Low Tide, and is marked with a Red Buoy.

From the Northward or Northeastward.

Bring Andrews Point, the Northeastern part of Cape Ann, to bear **SW.**, and run for it on this course until Straitsmouth Island Lighthouse is in range with the Northern Lighthouse on Thatcher's Island, bearing **S.** by **E.**; then run for them until the large Stone Factory bears **W.SW.**; then run in as before directed.

In order to clear the three Ledges called the Flat Ground, vessels at night bound to any of the harbors in Sandy Bay should keep well to the Northward, until the last-mentioned lights are in range.

Only 7 feet water can be carried into Rockport Harbor at Low Tide. Vessels of more than 7 feet draught, compelled in heavy easterly gales to enter this place as a harbor of refuge, should therefore wait until Half Flood.

It is High Water at Rockport 32 minutes before it is at Boston. Mean rise and fall of Tides $8\frac{3}{4}$ feet.

The Rockport Granite Company's Harbor.

By private enterprise a Granite Breakwater has been constructed here, which forms a small harbor, admitting vessels of 12 feet draught at Low Tide. The entrance to this harbor bears **W.NW.**, $1\frac{1}{2}$ miles from Straitsmouth Island Lighthouse, and **NW.** $\frac{1}{2}$ N. about $\frac{1}{2}$ mile from the end of Rockport Breakwater.

Dangers in approaching this Harbor.***Dodge's Rock.***

This Rock, which is bare, lies about $\frac{1}{3}$ mile from the shore, and is marked with a Spindle, which bears **NW.** by **W.** $\frac{1}{4}$ **W.** from Straitsmouth Island Lighthouse; distance $1\frac{3}{8}$ miles. Shoal ground extends in every direction from this Spindle, and vessels should not go near it. A Buoy is placed a short distance to the Southward of this ledge, which is left to the Northward in entering this harbor.

Mitchel's Rock.

This Rock, which is not buoyed at this date (1879), has about 4 feet water upon it at Low Tide, and lies about one-fifth of a mile from the shore. The Spindle on Dodge's Rock bears from it **S.** $\frac{1}{2}$ **W.** $\frac{1}{8}$ mile. There are from 3 to 4 fathoms water between these two last-mentioned rocks and the shore.

Sandy Bay Ledge.

This is a small rocky Island, which lies about two hundred yards from the Western shore, and bears **NW.** $\frac{1}{2}$ mile from the outer end of Rockport Breakwater, and is left to the Southward by vessels bound into the Rockport Granite Company's Harbor.

Sailing Directions for the Rockport Granite Company's Harbor.

From the Southward give Straitsmouth Island Lighthouse a berth of $\frac{1}{4}$ mile, and run **NW.** until the Buoy on Avery's Ledge bears **E.** by **S.**, on which bearing keep it, and steer **W.** by **N.** As you sail in, you will see, on the Starboard bow, a Buoy, and the Spindle on Dodge's Rock; you will also see on the Port, a small rocky Island lying near the shore, called "Sandy Bay Ledge." The Buoy and Spindle are both left to the Northward; the Ledge to the Southward. When about midway between the Spindle and this Ledge, run for the outer end of the Breakwater, and pass into the harbor. In going in, when abreast of the end of the Breakwater, keep nearer to it than the shore.

From the Northward or Northeastward bring Andrews' Point (the Northeastern part of Cape Ann) to bear **SW.**, and run for it on this course until Straitsmouth Island Lighthouse is in range with the Northern Lighthouse on Thatcher's Island, bearing **S.** by

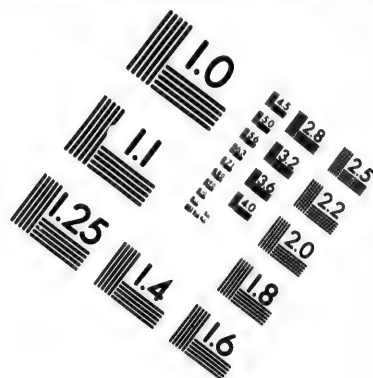
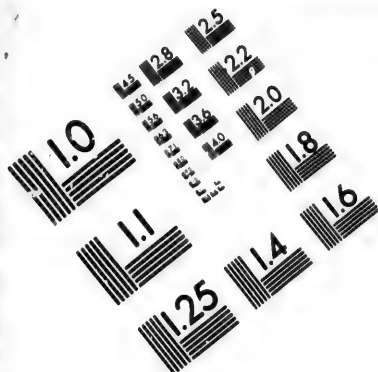
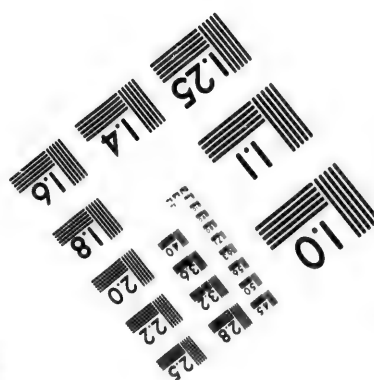
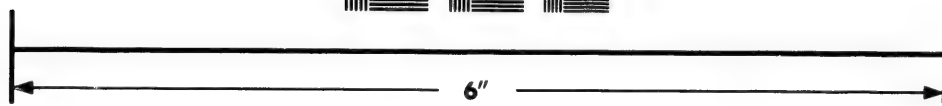
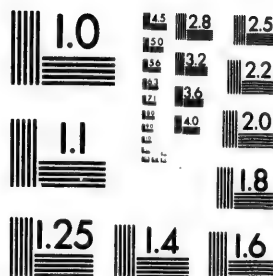


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E. ; then run for them on this course until the Tripod on the Dry Salvages bears East ; then steer West, and pass into the harbor, leaving the Buoy, Spindle, and Ledge as before directed.

Pigeon Cove Harbor.

The entrance to this cove bears **NW. $\frac{1}{2}$ W.** $1\frac{3}{4}$ miles from Straitsmouth Island Lighthouse, and **N. by W.** about 1 mile from the outer end of Rockport Breakwater. By private enterprise this Cove has been formed into a secure Harbor, and vessels of not more than 10 feet draught can enter it at low tide. It is said that a small charge is made to vessels using this cove as a harbor of refuge. The only danger to be avoided in entering it is Pigeon Rock, which lies a short distance south from the outer end of the Breakwater.

Sailing Directions for Pigeon-Cove Harbor, in Day-time, with favorable winds and fair weather.

From the Southward give Straitsmouth Island Lighthouse a berth of about $\frac{1}{4}$ mile, leaving the Red Buoy No. 2, on Avery's Ledge, a short distance to the Northward. When abreast of this Buoy, steer **W. by N.** until Straitsmouth Island Lighthouse bears **SE. $\frac{1}{2}$ E.** ; on which bearing keep it, and run **NW. $\frac{1}{2}$ W.**, leaving Mitchel's Rock and the Spindle on Dodge's Rock to the Westward ; continue the course **NW. $\frac{1}{2}$ W.** until you open the cove bearing about **N.NW.** ; then run in, passing between the pier which extends from the Breakwater towards the Western shore, and anchor where you please. In entering this harbor, keep nearest the Western shore, to avoid Pigeon Rock, which lies a short distance to the Southward of the outer end of the Breakwater.

From the Northward or Northeastward.

Run for Andrew's Point (the Northeast part of Cape Ann) on any bearing from **S. to SW.** until about $\frac{1}{4}$ mile from the shore ; then steer from **S. by W.** to **S.SW.** until you open the Cove ; then run in as before directed.

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Lane's Cove.

This Cove is situated upon the Northwestern shore of Cape Ann, about $1\frac{1}{2}$ miles Southwesterly from Halibut Point.*

Sailing Directions for Lane's Cove, in Daytime, with favorable winds and fair weather.

Vessels from the Southward may give Straitsmouth Island Light-house a berth of $\frac{1}{4}$ mile, leaving the Red Buoy No. 2, on Avery's Ledge, a short distance to the Northward. When abreast of this Buoy, steer about **N. by W. $\frac{1}{2}$ W.**, and haul round Halibut Point at a distance of $\frac{1}{2}$ mile. When abreast of this Point bearing **S.**, steer about **W.SW.**, keeping $\frac{1}{2}$ mile from the shore. As you sail to the Westward a settlement will appear, with a Church Tower rising above the houses; this small village is Lanesville, or Lane's Cove. Continue the course **W.SW.** until the entrance to the harbor bears **SE.**; then run in, passing midway between the points of the Breakwater.

In sailing in, the Black Buoy lying off to the Westward of this harbor is left about $\frac{1}{4}$ mile to the Southwestward.

About 12 feet water can be carried in between the points of the Breakwater at Low Tide.

Hodgkins' Cove, or Bay View.

This Cove lies upon the Northwestern shore of Cape Ann, about halfway between Lane's Cove and Annisquam.

Sailing Directions for Hodgkins' Cove, in Daytime, with favorable winds and fair weather.

From the Southward or Eastward haul round Halibut Point, the Northern extremity of Cape Ann, at a distance of $\frac{1}{2}$ mile from the shore. When this point bears **S.**, steer about **W.SW.**, keeping about $\frac{1}{2}$ mile from the land. When abreast of Lane's Cove, you will see to the Westward a Black Buoy, No. 1; this Buoy lies upon the Northern part of a Ledge which extends from the shore. Leave this Buoy a short distance to the Southward, and run **S.SW.** until the outer end of the wharf bears **S.SE.**; then run for it on

* Halibut Point, the Northern extremity of Cape Ann, bears from the Tripod on the Salvages, NW. by W. 3 miles.

this course. At this date (1879) there is at the outer end of this wharf from 8 to 10 feet water at Low Tide. The Eastern side of this wharf is somewhat exposed to Northerly winds.

It is High Water at Hodgkins' Cove 30 minutes before it is at Boston. Mean rise and fall of tides 9 feet.

There are extensive Granite Quarries both at Bay View and Lanesville.

Harbor of Annisquam.

The entrance to this harbor is about $2\frac{3}{4}$ miles in a Southwesterly direction from Halibut Point (the Northern extremity of Cape Ann), and there are usually about 6 feet water on the Bar at Low Tide.

Lighthouses.

A Lighthouse showing a fixed White Light is erected upon Wigwam Point. This Light in entering the harbor is left to the Eastward.

Dangers in entering this Harbor.

Harriden's Rock.

This Rock, which at very Low Tides has but 5 feet water upon it, is marked on its Western side with a Black Buoy, No. 3, which in entering the harbor is left to the Eastward. Annisquam Light-house bears from this Buoy **S. by W. $\frac{1}{2}$ W.**; distance about $\frac{1}{2}$ mile.

Lobster Rock.

A square Granite Beacon of open work, with its top painted black, is built upon this Rock, which is dry at Low Tide. This Beacon bears from Annisquam Lighthouse **SW. by S. $\frac{1}{2}$ S.** about $\frac{1}{4}$ mile, and in passing in is left on the Port hand.

Barn Rocks.

These Rocks, which generally can be seen, are not Buoyed at this date, and lie on the Western side of the Channel. They are but a short distance from the Southern shore, and bear from Annisquam Lighthouse **SW. by S.** a little more than $\frac{1}{2}$ mile. In passing in, these Rocks are left on the Starboard hand.

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Sailing Directions for Annisquam Harbor in Day-time, with favorable winds and fair weather.

From the Eastward or Southward haul round Halibut Point (the Northern part of Cape Ann) at a distance of $\frac{3}{4}$ mile, and make good the course **W.SW.** until Annisquam Lighthouse is made. If your vessel draws as much as 10 feet water, wait until about $\frac{3}{4}$ Flood; then bring the Lighthouse to bear **S.**, and run for it on this course, passing about midway between the Red Buoy upon the Bar and the Black Buoy off Harriden's Rock. When this last-mentioned Black Buoy bears **N.NE.** make good the course **S.SW.**, leaving the Lighthouse not more than 125 yards to the Eastward, and the Beacon on Lobster Rock not more than 50 yards to the Eastward. When abreast of the Beacon, shorten sail, and steer **S.** by **W.** $\frac{3}{4}$ **W.** until you see another Beacon which stands off Lane's Point.

When this last-mentioned Beacon comes in range of Babson Point * bearing **SE.**, run **SE.** by **S.** (leaving Barn Rocks on the Starboard hand) until Lane's Point Beacon bears **N.** by **E.**; then anchor in from 3 to 4 fathoms water.

If bound into the Inner Harbor, when Lane's Point Beacon is on with Babson's Point, bearing **SE.**, run **SE.** by **S.** until the Beacon bears **E.** by **N.**; then run for it, leaving it close to on the Port hand. After passing the Beacon a short distance, run for the Wharves.

From the Northeastward bring the Isle of Shoals Light to bear **N.NE.**, and make good the course **S.SW.** to Annisquam Bar. From Newburyport Bar, bound to Annisquam, steer **S.** by **E.** $\frac{1}{2}$ **E.**

At Night.

Strangers in vessels of much size should not attempt at night to enter this harbor except in cases of emergency, as the Channel is narrow, and a slight deviation from the course may lead to difficulty; but as it sometimes happens that, with heavy Northerly or Northeasterly gales, they are compelled to enter it in order to save the lives of those on board of them, the following directions may therefore be of great advantage.

* Babson's Point is on the Northern side of the harbor, and bears **NW.** from Lane's Point Beacon; distance 300 yards.

Sailing Directions for Night-time.

If possible, wait until $\frac{3}{4}$ Flood; then bring Annisquam Light to bear S., and run for it under short sail, making use of the Lead. When the water shoals to $2\frac{1}{4}$ fathoms, the Light will be distant about $\frac{1}{4}$ mile. The course is then S. by W. $\frac{3}{4}$ W., leaving the Light and Beacon on Lobster Rock a short distance to the Eastward. After passing this Light about $\frac{1}{2}$ mile, steer more South-erly, and in order to clear Barn Rocks haul round Babson's Point (the land on the Port bow) at a distance of 50 yards, and anchor with this point bearing N.

High Water.

It is High Water at Annisquam Bar 20 minutes before it is at Boston. Common Tides rise about 9 feet.

Remarks.

In entering Annisquam Outer Harbor, the Channel is narrow, and the shoalest water is upon the Bar, which at Low Tide is about 6 feet. The above directions were good for 1879.

Essex Harbor, or River.

The entrance to this River is $4\frac{1}{4}$ miles in a Southwesterly direc-tion from Halibut Point (the Northern extremity of Cape Ann), and 2 miles Northwesterly from Annisquam Lighthouse. A Sand Bar having at Low Tide about 6 feet water upon it, extends across its entrance. The Channel across this Bar is constantly changing, and Buoys are placed upon it to mark its Northern and Southern spits, and likewise the Channel a part of the way up to Essex. This harbor may be called a shoal-water place.

Sailing Directions for Essex Harbor in Daytime, with favorable winds and fair weather.

Coming from the Southward around Cape Ann, leave Halibut Point about $\frac{3}{4}$ mile to the Southward, and steer W. by S. $\frac{1}{2}$ S. until you make the Buoys (one Black, the other Red) upon Essex River Bar. These Buoys lie about midway between Annisquam

and Ipswich Lighthouses. After making these Buoys, anchor, or lay off and on until about $\frac{3}{4}$ Flood; then run to the Southwestward, crossing the Bar midway between the two Buoys, and run in, leaving the Beacon and Red Buoys on the Starboard hand close to. When you are abreast of the upper Buoy, or can see no other Buoy above you, then anchor. This harbor should not be attempted by vessels of much size, excepting when necessity compels. Small vessels may make a harbor by the above directions; but it is advisable, if bound up to Essex, to take a pilot.

Lighthouses.

At this date (1879) there is no Light at Essex Harbor.

High Water.

It is High Water at Essex River Bar 18 minutes before it is at Boston. Common Tides rise about 9 feet.

From the Northeastward bring the Isle of Shoals Light to bear NE. by N. $\frac{3}{4}$ N., and make good the course SW. by S. $\frac{3}{4}$ S. to Essex Bar; then follow the directions before given.

Ipswich Harbor.

This Harbor or River is situated about 7 miles in a Northwest-erly direction from Halibut Point (the Northern extremity of Cape Ann). The Bar at its entrance, like those of the other harbors in Ipswich Bay, is constantly changing, and the deepest water across it is usually not more than from $4\frac{1}{2}$ to 6 feet at Low Tide. A movable Beacon, showing a fixed White Light, is placed in front of the main Lighthouse. This Beacon is shifted so as to be always in range with the main Light, and the line of best water over the Bar. Vessels can therefore, if necessity compels, run in on this range at night or day.

Lighthouses.

On Castle Neck, South side of the entrance to Ipswich Harbor, are located two Light Towers nearly 200 feet apart, ranging East and West. The Eastern Tower, which, at this date, is only lighted,

shows a fixed White Light, varied by White Flashes. The Western Light has long been discontinued. These Towers bear from Halibut Point (the Northern extremity of Cape Ann) W. $\frac{3}{4}$ N., distance 6 miles; from Annisquam Lighthouse, NW. by W., distance 4 miles; from Isle of Shoals Lighthouse, SW. by S., distance $18\frac{1}{4}$ miles; from the Lighthouse on Whale's Back entrance to Portsmouth Harbor, S. by W. $\frac{3}{4}$ W., distance 23 miles.

Ipswich Beacon Light.

This movable Beacon, which shows a fixed White Light, is placed near the shore in front of the Main Lighthouse, and is shifted as often as the Channel changes. In order, therefore, to cross the Bar in the deepest water, vessels in daytime should bring this Beacon in range with the Eastern Lighthouse.

Dangers.

A Sand Bar extends across the entrance of this harbor, and the depth of water upon it changes during every heavy gale. Sand Bars also extend from Plum Island Point and Castle Neck, which form the Northern and Southern sides of its entrance. This place may therefore be considered a shoal-water harbor.

Remarks.

Vessels bound to Ipswich should take pilots off the Bar; but as it sometimes happens that they are compelled to make this harbor in order to save their lives, the following directions may therefore in such cases be invaluable.

Sailing Directions for Ipswich Harbor in Daytime, with favorable winds and fair weather.

If your vessel draws as much as 10 feet water, wait, if possible, off the bar until about $\frac{3}{4}$ Flood; then bring the Beacon or Lighthouse near the shore in range with the Eastern Lighthouse, bearing Southwesterly, and run in on this range. As you approach the Lights, you will see the two Buoys (one red, the other black) on the Spits of the Bar. Pass between these two Buoys, and run about SW. by W. $\frac{3}{4}$ W. for the Inner Spit Buoy (which is red). Leave this last-mentioned Buoy close to on the Starboard hand, and

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steer for the Beacon Light (bearing about **SW.**) until you are about 200 or 300 yards from the Beach; then follow the shore to the Northwestward, keeping about the same distance from it until abreast of Ipswich River (which is the first opening after passing the Lights). When abreast of this River, steer more Northerly for the middle of Plum Island Sound, and anchor in from 4 to 6 fathoms water, with Plum Island Point (which is on the Eastern side of the entrance) bearing about **SE.** from you. The anchorage in this Sound between Great Neck and Plum Island is somewhat exposed in heavy Easterly gales and very High Tides, and the holding-ground is said to be poor. If bound up to Ipswich, when abreast of the river a Pilot is necessary.

Coming from the Southward around Cape Ann, leave Halibut Point about $\frac{3}{4}$ mile to the Southward, and run **W. $\frac{1}{2}$ N.** for Ipswich Bar. From the Northeastward bring the Isle of Shoals Light to bear **NE.** by **N. $\frac{1}{2}$ N.**, and make good the course **SW.** by **S. $\frac{1}{2}$ S.** for the above-mentioned Bar.

Plum Island Sound.

The entrance to Plum Island Sound bears about **NW.** by **N. $\frac{1}{2}$ N.** from Ipswich Lights; distance $1\frac{1}{2}$ miles. Upon the Western side of this Sound are several small shallow streams, one of which is called Parker River. The old town of Newbury is built upon the Northern bank of this River.

High Water.

It is High Water at Ipswich Bar about 20 minutes before it is at Boston. Common Tides rise about $9\frac{1}{2}$ feet.

Dangers to be avoided in sailing into Ipswich Bay.

This Bay lies between Halibut Point (the Northern extremity of Cape Ann) and the Southern Point of Plum Island. The principal dangers to be avoided in entering it are as follows: Plum Cove Ledge, Annisquam, Essex, and Ipswich Bars. Plum Cove Ledge, which is dry at Low Tide, lies about $\frac{1}{6}$ mile from shore, and is marked upon its Northwestern part with a Black Buoy, No. 1. This Buoy bears **NE. $\frac{1}{4}$ N.** from Annisquam Lighthouse; distance $1\frac{1}{4}$ mile. In order to avoid the above-mentioned Bars, use the Lead, and do not approach them in less than 5 fathoms water.

Beating into Ipswich Bay.

Vessels at night-time, or in thick weather, beating into Ipswich Bay should take care to avoid the Eastern shore, especially from Halibut Point to Lane's Cove,* as in some places the shores are very bold, and there are 9 fathoms water within a stone's throw of the rocks; but you may boldly stand into 5 or 6 fathoms water on the Western side of this Bay without danger.

The Coast from Ipswich Entrance to Newburyport Bar.

In sailing from Ipswich entrance to Newburyport Bar, the only dangers to be avoided are the Sand Bars, which extend from $\frac{1}{4}$ to $\frac{1}{3}$ mile from shore. At night, use the Lead (which is a sure guide), and do not approach nearer the land than 5 fathoms water.

Newburyport Harbor.

The entrance to this harbor (off the Bar in 6 fathoms water) bears from Halibut Point (the Northern extremity of Cape Ann) NW. by N., distance $10\frac{1}{2}$ miles; from the Isle of Shoals Light, SW. $\frac{3}{4}$ W., distance $12\frac{1}{4}$ miles; from Annisquam Lighthouse, N. by W. $\frac{1}{2}$ W., distance $10\frac{1}{2}$ miles; from Ipswich Bar, N. $\frac{1}{2}$ W., distance $7\frac{1}{2}$ miles; from Light on Whale's Back, SW. by S. $\frac{1}{2}$ S., distance $15\frac{3}{4}$ miles.

Lighthouses.

Upon the Northern end of Plum Island, South side of entrance to Newburyport Harbor, a Lighthouse is built, which shows a fixed White Light.

Newburyport Beacon.

This movable Beacon, which shows a fixed White Light, is placed in front of the Main Lighthouse, and is shifted as often as the Channel changes. In order, therefore, to cross the Bar in the deepest water, vessels should bring this Beacon in range with the Lighthouse.†

* Lane's Cove is situated about $1\frac{1}{4}$ miles Southwesterly from Halibut Point.

† A Whistling Buoy has been placed off Newburyport Bar in 9 fathoms water. Newburyport Main Lighthouse bears W. $\frac{1}{4}$ S. from this Buoy.

Upper Harbor Beacons.

In front of the city of Newburyport are placed two Range Lights. The Tower of the front Light (which stands upon Bailey's Wharf) is painted black, and shows a Red Fixed Light. The Rear Lighthouse is a Pyramidical Tower, red brick color, lantern black, and shows a Green Fixed Light. These Lighthouses, when in range bearing **W. $\frac{1}{2}$ S.**, lead midway between the two piers to the anchorage off the town.

Dangers in entering this Harbor.

A Sand Bar extends across the entrance of this harbor, and the depth of water upon it (which is usually from 4 to 6 feet) changes during every heavy gale. Buoys are placed upon this Bar; and, in order to show the best water across it, are shifted by the pilots whenever it is necessary. The Beacon in front of the Lighthouse is also moved, so as to be in range with the Light and Bar Buoys.

Extensive Flats, which are dry at Low Tide, lie on both sides of the Channel leading to the city. There are also several rocks, some of which are bare at Low Tide.

Black Rocks.

These Rocks, upon which a Beacon is built, lie upon the Northern side of the Channel, and are bare at Half Tide. This Beacon, which is painted red, bears from Newburyport Main Lighthouse about **N.NW.**; distance $\frac{1}{3}$ mile.

About **SE.** by **E. $\frac{1}{2}$ E.**, $\frac{1}{2}$ mile from Black Rock Beacon, is a bare rock, which lies about 20 yards from shore.

Lunt's Rock.

This Rock, which is bare at $\frac{3}{4}$ Ebb, lies upon the Northern side of the Channel, and is marked on its Southern side with a Red Buoy, No. 2. Newburyport Main Lighthouse bears from this Buoy about **SE.**; distance $\frac{5}{8}$ mile.

Gangway Rock.

This Rock, which at very Low Tide has but little water upon it, is marked with a Buoy painted in black and white perpendicular stripes. This is called Midchannel Buoy, and bears **SE. $\frac{1}{2}$ S.** from the Northern Pier, distance 100 yards, and East 250 yards

from the Southern Pier. In order to avoid this Rock, bring the harbor lights in range, and run for them. This range will carry you nearly midway between the Northern and Southern Piers, and about 50 yards to the Northward of Gangway Rock.

Half-Tide Rock.

On the Western side of the Channel, about 300 yards **W. $\frac{3}{4}$ S.** from Channel Rock Buoy, is a large rock bare at Half Tide. There are several smaller rocks near it also bare at Low tide.*

The Botlers.

These are two sunken Rocks which lie close to the end of Custom-House Wharf.

The Sow and Pigs.

These Rocks, some of which are bare at Low Tide, lie on the Northern side of the river, about 100 yards **SE.** from the Ferry Ways, at Ferry Village.

Remarks.

Upon Newburyport Bar at High Tide, in the best of the water, there is usually not less than 12 feet; but as the depth and location of the Channel is constantly changing, it is therefore advisable for vessels of more than 9 feet draught, except in cases of great necessity, to take pilots. It must be also borne in mind that in Easterly gales this Bar cannot be safely crossed. In such weather, vessels should, if possible, make some other harbor.

Sailing Directions for Newburyport Harbor in Day-time, with favorable winds and fair weather.

From the Southeastward bring Halibut Point (the Northern extremity of Cape Ann) to bear **SE.** by **S.**, and make good the course **NW.** by **N.** for Newburyport Bar. If your vessel draws as much as 10 feet water, wait, if possible, until nearly High Water. Then bring the Lighthouses in range bearing about **W.**, and steer for them until you make the black and white perpendicular-striped Buoy upon the outer Bar. Bring this Buoy in range with the main Lighthouse, and run in, leaving it close to on either hand.

* An appropriation has been made by the United States Government for the improvement of the Channel leading into Newburyport Harbor; it is therefore probable that some of these Rocks were removed before the publication of this work.

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When abreast of it, keep the Lights in range until you see another black and white perpendicular-striped Buoy. This last is the Inner Bar Buoy. Leave this last-mentioned Buoy close to on the Port hand, and steer for the Black Buoy off Plum Island Spit, leaving it on the Port hand; thence between another Black Buoy and Beacon. When about midway between this Buoy and Beacon, steer for the town, leaving the Black Buoys on the Port, and the Red ones on the Starboard hand. As you sail in, you will see two more Beacons or Lighthouses. Bring them in range, and steer for them. On this range you will pass about 50 yards to the Northward of the Buoy off Gangway Rock, and also midway between the piers to the anchorage off the city.

From the Northeastward bring the Isle of Shoals Light to bear NE. $\frac{3}{4}$ E., and make good the course SW. $\frac{3}{4}$ W. for Newburyport Bar, then follow the directions before given.

Sailing Directions for Night-time.

Strangers should not at night attempt to enter this harbor except in cases of emergency, but if necessity compels, if possible, do not come nearer the bar than 10 fathoms of water until nearly high tide; then bring the lights in range and run in for them, keeping a sharp lookout for the Buoys. When abreast of the Inner Bar Buoy, haul more Northerly and pass in, keeping nearer Salisbury Point* than the Lighthouse. When the main or Western Light bears S. by E., steer W. by N. $\frac{1}{2}$ N., leaving the Beacon upon Black Rocks about 150 yards on the Starboard hand, until the Red and Green Lights in front of the city are in one; then run for them on this range, which will take you between the piers to the anchorage off the town.

In crossing the Bar, with the Lights in range, if you should not make the Buoys, when you judge the Lights are $\frac{1}{4}$ mile from you, haul more Northerly for Salisbury Point, leaving it about 150 yards on the Starboard hand, and proceed as before directed.

Merrimac River.

The entrance to this River is across Newburyport Bar.

* Salisbury Point is opposite Newburyport Lights, and forms the Northern side of entrance to the Harbor. The passage between this point and the Lights is about $\frac{1}{4}$ mile in width, and the Channel is usually nearest to this point.

High Water.

It is High Water at Newburyport Bar about 20 minutes before it is at Boston. Common tides rise about $7\frac{3}{4}$ feet.

Hampton Harbor.

This harbor is about miles North from Newburyport entrance, and at this date (1879) is not buoyed. A number of dangerous rocks and ledges lie off its entrance, and the harbor has but little water in it at Low Tide. Vessels therefore, bound into this place, should take pilots.

Rye Harbor.

This harbor lies about 4 miles Southwesterly from the light on Whale's Back (entrance to Portsmouth Harbor), and is of but little consequence.

The Coast from Newburyport Bar to Entrance off Portsmouth Harbor.

From Newburyport Bar to Whale's Back Lighthouse the course is NE. by N. $\frac{1}{2}$ N.; distance $15\frac{3}{4}$ miles. Vessels in sailing from Newburyport Bar to the entrance of Portsmouth Harbor should keep at least a mile from shore, as there are numerous rocks and shoals that lie off this part of the coast. In thick weather or night-time use the lead, and do not approach nearer to it than 10 fathoms water at Low Tide, and $11\frac{1}{2}$ at High Tide.

Portsmouth Harbor.

The entrance to this harbor is nearly North from Cape Ann, distant about 25 miles; Southwesterly from Cape Elizabeth, distant 37 miles; and Northeasterly from Newburyport Bar, distant about 15 miles.

Whale's Back Lighthouse.

This Lighthouse, which shows a fixed White Light varied by white flashes, is located upon a Ledge of Rocks called Whale's Back. In entering the harbor, this light is left on the Starboard hand. A Fog Trumpet (at this date) is placed near the Light-

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house, giving blasts of 8 seconds' duration, at intervals of 22 seconds. This Lighthouse bears from Thatcher's Island Lights (Cape Ann) North about 26 miles; from the Isle of Shoals Light N. by W. $\frac{3}{4}$ W., distance $6\frac{1}{2}$ miles; from Newburyport Bar NE. by N. $\frac{1}{2}$ N., distance $15\frac{3}{4}$ miles; from Boon Island Lighthouse W. $\frac{3}{4}$ S., distance $10\frac{1}{2}$ miles.

Portsmouth Harbor Lighthouse.

This Lighthouse, which shows a fixed White Light, is located at Newcastle, and in entering the harbor is left on the Port hand. This last-mentioned Lighthouse bears from the Light upon Whale's Back N.NW.; distance about 1 mile.

Dangers in approaching Portsmouth Harbor.

York Ledge.

This dangerous Ledge, which extends Northeasterly and Southwesterly about $\frac{3}{4}$ mile, is bare at three-quarters ebb, and is marked with an Iron Spindle 28 feet high, with an Iron Cage on top. From this Spindle the sunken portion of the Ledge extends about NE. nearly $\frac{1}{2}$ mile. Vessels therefore from the Northeastward should give this Spindle a berth of 1 mile, and from the Southwestward should not approach it nearer than $\frac{1}{2}$ mile. Ten fathoms water was found 125 yards South from this Ledge, and 9 fathoms 200 yards North from it. In thick weather or night-time, the lead, therefore, gives but little or no warning in approaching it. Boon Island Light bears from this Spindle E. $\frac{1}{2}$ N., distance $5\frac{1}{2}$ miles; Isle of Shoals Light, S.SW., distance $7\frac{3}{4}$ miles; Whale's Back Light, W. by S., distance 5 miles; Stone's Rocks, NW. $\frac{3}{4}$ W., distance 2 miles. Cape Neddick Light N. by E. $\frac{1}{6}$ E. $4\frac{2}{3}$ miles.

Stone's Rocks.

This Ledge, which lies nearly $\frac{1}{2}$ mile from the shore, abreast of York Ledge, is bare at Low Tide, and is marked with a Spindle, and also upon its outer part with a Black Buoy, which in sailing along the shore are both left to the Westward. York Ledge Spindle bears from this Buoy SE. $\frac{3}{4}$ E. The Channel between York Ledge and Stone's Rocks is about 2 miles in width, with not less than from $4\frac{1}{2}$ to 12 fathoms water in it.

Triangles, or Murray's Rock.

These Ledges extend nearly North and South about $\frac{1}{2}$ mile. Upon the Southern Ledge is a rock, having at very low tides but 5 feet water upon it. This is called Murray's Rock, and is marked off its Southern part with a Buoy having Red and black horizontal stripes. Boon Island Lighthouse bears from this Buoy **E.** by **N.** $\frac{1}{4}$ **N.**, distance $6\frac{1}{2}$ miles; Isle of Shoals Light, **S.** by **W.** $\frac{3}{4}$ **W.**, distance $6\frac{1}{4}$ miles; Whale's Back Light, **W.**, distance 4 miles; York Ledge Spindle, **NE.** $\frac{1}{4}$ **N.**, distance $1\frac{1}{2}$ miles. The Channel between York Ledge and Murray's Rock is about $1\frac{1}{2}$ miles in width; heavy-draught vessels, in passing between them, should keep nearest York Ledge.

Dangers on Eastern Side of Entrance to Portsmouth Harbor.***Eastern Sister.***

This is a small bare rock, surrounded by sunken ledges, lying about $\frac{1}{4}$ mile from shore, and bears from Whale's Back Light **E.** by **N.**; distance $1\frac{1}{2}$ miles.

Western Sister.

This rock is bare at Low Tide, and is also surrounded by sunken ledges; it is marked off its Southern part with a Red Buoy No. 2, which, in coming from the Eastward, is left on the Starboard hand. Whale's Back Lighthouse bears from this Buoy **W.** $\frac{3}{4}$ **N.**; distance about 1 mile.

Philip's Rocks.

These Rocks, which at very Low Tides have but 9 feet water upon them, are not Buoyed at this date (1879). They lie about **SW.**, distance $\frac{1}{4}$ mile, from the Buoy on the Western Sister, and **E.** by **S.**, a little more than $\frac{3}{4}$ mile from Whale's Back Lighthouse. Vessels of more than 8 feet draught at Low Tide should give these Rocks a wide berth.

Kitt's Rocks.

These sunken Ledges, which have at very Low Tides about 11 feet water upon them, are marked off their Southern part with a Red Buoy, No. 4, which in passing in is left on the Starboard hand. Whale's Back Lighthouse bears from this Buoy **N.** by **W.**; dis-

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distance $\frac{1}{2}$ mile. Vessels of more than 8 feet draught at Low Tide should not pass between this Buoy and the Lighthouse, as there are several sunken rocks in this Channel.

Dangers on Western Side of Entrance to Portsmouth Harbor.

Gun-Boat Ledge.

This Ledge, which lies about 1 mile from shore, has at Low Tide about 20 feet water upon it. Whale's Back Light bears from the centre of this Ledge, N. by E. $\frac{1}{2}$ E., distance $2\frac{1}{4}$ miles; Isle of Shoals Light, SE. by S., distance $4\frac{3}{4}$ miles.

Stilesman's Rocks.

These Rocks, which extend about $\frac{1}{3}$ mile from the Western shore, lie $\frac{1}{4}$ mile S. by W. from Portsmouth Lighthouse, and are marked on their outer part with a Black Buoy, No. 3, which in sailing in is left on the Port hand.

Remarks.

The depth of water in entering Portsmouth Harbor is sufficient to admit vessels of the heaviest draught, even at the lowest Tides. With an Ebb Tide and light winds, or winds ahead, the harbor is difficult of access on account of the current, which sets out very strong. The shores in entering are very bold, and the Lead gives but little warning in approaching them.

Sailing Directions for Portsmouth Harbor, in Day-time, with favorable winds and fair weather.

From the Southward, after passing the Tripod or Spindle on the Dry Salvages, bring Thatcher's Island Lighthouses to bear South, and make good the course North for Whale's Back Lighthouse at the entrance of Portsmouth Harbor. If there is no deviation from this course, the Isle of Shoals Lighthouse will be left about 2 miles to the Eastward. As soon as the Lighthouse upon Whale's Back is made, bring it to bear North, and run for it on this course. When from 1 to 2 miles from this Lighthouse, haul to the Northwestward until you open the entrance to the harbor; then run in about N. $\frac{1}{4}$ E., keeping midway between Whale's Back Lighthouse and the

Western shore. Continue the course **N. $\frac{3}{4}$ E.**, leaving the Black Buoy off Stilesman's Rocks and Portsmouth Lighthouse, both on the Port hand; haul round the point on which the Fort stands at a distance of about 200 yards. As you enter the harbor, you will see the Black Buoy, No. 5, off Cod Rock. This Buoy lies about 250 yards **NW.** from the Northeastern part of Fort Constitution.* Leave this Buoy close to on the Port hand, and make good the course **NW.** by **W.** about $\frac{1}{4}$ mile; then haul up about **W. $\frac{1}{2}$ N.**, keeping in mid-channel, leaving the Black Buoy No. 9, off Goat Island Ledge, about 50 yards on the Port hand. Continue the course **W. $\frac{1}{2}$ N.** until you open the two large Ship Houses at the Navy Yard from behind Seavy Point (which is on the Starboard hand); then steer about **N.NW.**, passing in mid-channel through the Narrows. As you sail in, you will see on the Port hand a Black Beacon, and also two Buoys, one black, the other painted in red and black horizontal stripes. Leave the Beacon and last-mentioned Buoys on the Port hand, and haul in for the Wharves, leaving another Black Buoy, No. 13, on the Port hand.

It is advisable for vessels intending to anchor off the Wharves to have a long scope of Cable overhauled around the Windlass, as there is from 10 to 12 fathoms water in the harbor at Low Tide.

From the Northeastward.

From the Northeastward leave Cape Neddick Light (which bears **NW. $\frac{1}{2}$ W.** from Boon Island Lighthouse, distance $5\frac{3}{4}$ miles) about 1 mile to the Westward, and make good the course **SW. $\frac{1}{2}$ S.**, passing midway between the Spindle on York Ledge and the Buoy and Spindle on Stone's Rocks, and also midway between the Buoy on Murray's Rock and shore. Continue the course **SW. $\frac{1}{2}$ S.** (leaving the Red Buoy on the Western Sister on the Starboard hand) until Whale's Back Lighthouse bears **W.NW.**; then run about West, leaving the Red Buoy off Kitt's Rocks upon the Starboard hand. After passing this last-mentioned Buoy, run Northwesterly until the entrance to the harbor is fairly open; then run in midway between Whale's Back Lighthouse and the Western shore, and proceed as before directed.

* Fort Constitution is about 100 yards Northwest from Portsmouth Lighthouse.

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After passing Boon Island Lighthouse about 2 miles, bring it to bear **E.NE.**; on which bearing keep it, and steer **W.SW.**, leaving the red and black horizontal-striped Buoy on Murray's Rock to the Northward. Continue the course **W.SW.** until Whale's Back Lighthouse bears **W.NW.**; then steer about **W.** by **N.**, leaving the Red Buoy off Kitt's Rocks on the Starboard hand. After passing this Buoy, run Northwesterly until the harbor is fairly open; then run in midway, and proceed as before directed.

Anchorage in Daytime.

In order to avoid the strong current or tide, the following, in daytime, are the best places for anchorage in Portsmouth Lower Harbor.

After passing the Lighthouse Point in accordance with directions before given, bring Portsmouth Lighthouse to bear **SE. $\frac{1}{2}$ S.** (distance about $\frac{1}{4}$ mile); on which bearing keep it, and steer **NW. $\frac{1}{2}$ N.** As you sail in, you will see on the Port hand Clark's Island, which is small, and another nearly ahead; this is Jamacia Island; and on the Starboard a Red Buoy, No. 8, which lies off the Southwest part of Hick's Rocks. Continue the course **NW. $\frac{1}{2}$ N.**, passing about midway between this last-mentioned Buoy and Clark's Island. When the Buoy bears **E.** by **S. $\frac{1}{2}$ S.**, steer **W.** by **N. $\frac{1}{2}$ N.**, and anchor about midway between these two last-mentioned Islands in from 4 to 6 fathoms water. Or you may run **NW. $\frac{1}{2}$ N.** from Portsmouth Lighthouse until abreast of the Red Buoy No. 8, which leave about 100 yards on the Starboard hand, and run up about **N.** by **E. $\frac{1}{2}$ E.**, and anchor in mid-channel near the Bridge in from 5 to 6 fathoms water. In running this last course, **N.** by **E. $\frac{1}{2}$ E.**, the Black Buoy No. 7, which lies off Jamaica Ledge, is left on the Port hand.

Beating into Portsmouth Harbor, in Daytime.

In daytime, beating between the Isle of Shoals and main land, bound into Portsmouth Harbor, do not approach the Western shore nearer than 1 mile until abreast of Odiorne's Point, which bears from Whale's Back Lighthouse **SW.**; distance $1\frac{1}{4}$ miles. From Jerry's Point (which bears West from Whale's Back Lighthouse) to Stilesman's Rocks, the Western shore may be approached within 850 yards without danger.

Sailing Directions for Portsmouth Harbor at Night-time, with favorable winds and fair weather.

From the Southward leave Thatcher's Island Lights 3 or 4 miles to the Westward, and when they bear **W.** by **N.**, run **N. $\frac{1}{2}$ W.** for the Isle of Shoals Light; (on this course the Salvages will be left about 3 miles to the Westward.) Leave this last-mentioned Light (which is Red and White Flashing) about 2 miles to the Eastward, and steer **N. $\frac{1}{2}$ W.** for Portsmouth Harbor. When about 3 miles from the entrance, bring Portsmouth Light (which is Fixed) to bear **N. $\frac{1}{2}$ W.**, and run for it on this course: If there is no error in the Compass, Whale's Back Light (which is Flashing) will be left $\frac{1}{4}$ mile to the Eastward. Continue the course **N. $\frac{1}{2}$ W.** for Portsmouth Light until Whale's Back Light bears **E. SE.**; then haul up **N. $\frac{3}{4}$ E.**, keeping a sharp lookout for Wood Island, and also the Buoy off Stilesman's Rocks, the former of which is left on the Starboard, and the latter on the Port hand. If the night is very dark when abreast of Whale's Back Light, use the Lead, which is a sure guide, and do not go into less than 7 fathoms at Low Tide, and 8 $\frac{1}{2}$ at High Tide. When abreast of Portsmouth Lighthouse, haul round the point (which is bold) at a distance of from 200 to 300 yards. If bound up to the city, when the Light bears **S. SE.**, distance about $\frac{1}{2}$ mile, anchor in from 8 to 10 fathoms water, and wait until daylight.

Coming from the Northeastward, leave Cape Neddick, which is bold, about $\frac{1}{2}$ mile to the Westward. When Cape Neddick Light bears **NW.**, steer **SW.** by **W.** until it bears **NE.** by **N. $\frac{1}{2}$ N.**; on which bearing keep it, and run **SW.** by **S. $\frac{1}{2}$ S.**, passing about midway between York Ledge and Stone's Rocks. When Whale's Back Light bears **W. NW.**, make good the course **W. $\frac{3}{4}$ N.** until Portsmouth Light is well open to the Westward of Whale's Back Light, bearing **N. $\frac{1}{2}$ W.**; then run for it on this course, and proceed as before directed.

From the Eastward or Seaward, leave Boon Island 2 or 3 miles to the Northward, and steer **W. NW.** until it bears **NE.** by **E. $\frac{1}{2}$ E.**; then run in as before directed.

Best Anchorages at Night-time.

Haul round the Lighthouse Point (which is bold) at a distance of from 200 to 300 yards, in accordance with directions before given.

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When Portsmouth Light bears **SW.**, haul up **W.NW.**, and anchor in from 8 to 10 fathoms water, the Light bearing **S.SE.**, distance about $\frac{1}{3}$ mile. Or when Portsmouth Light bears **S.** by **W.** $\frac{1}{2}$ **W.** make good the course **N.** by **E.** $\frac{1}{2}$ **E.** until the water shoals to 4 fathoms at Low Tide, and $5\frac{1}{2}$ at High Tide; then anchor to the Westward of the Beacon upon Logy Ledge. This last place is somewhat exposed in heavy Southerly winds.

Beating into Portsmouth Harbor at Night.

Beating into Portsmouth Harbor, it is not prudent at night to stand to the Westward further than to bring Portsmouth Light to bear **N.** $\frac{1}{2}$ **E.**; and in order to clear Kitt's Rocks in standing to the Eastward, it is necessary to keep Portsmouth Light well open to the Westward of Whale's Back Light. When abreast of this last-mentioned Light, use the Lead, and do not approach either shore nearer than 7 fathoms water at Low Tide, and $8\frac{1}{2}$ at High Tide. When about half-way from Whale's Back Light to Portsmouth Light, keep the Eastern shore best aboard in order to avoid Stilesman's Rocks which extend off from the Western shore, and bear **S.** by **W.** from Portsmouth Light; distance $\frac{1}{4}$ mile.

Entering Portsmouth Harbor in Thick Weather.

At this date (1879) there is a Fog Trumpet at Whale's Back (East side of entrance to this harbor) giving blasts of 8 seconds' duration at intervals of 22 seconds. As soon as this Trumpet or Fog Signal is heard, bring it to bear from North to **N.** $\frac{1}{2}$ **E.**, and run for it on this course, leaving Whale's Back Lighthouse about 200 yards to the Eastward. When abreast this last-mentioned Light, steer about **N.** $\frac{1}{2}$ **W.**, keeping in not less than 7 fathoms water at Low Tide, and $8\frac{1}{2}$ at High Tide, until past Portsmouth Light; then anchor.

Piscataqua River.

The entrance to Dover and other places upon this River is by way of Portsmouth Harbor.

High Water.

It is High Water in Portsmouth Harbor 5 minutes after it is at Boston. Common Tides rise about 9 feet.

Isles of Shoals.

These are a group of rocky Islets (with many sunken Ledges near them) lying about 6 miles Southeasterly from the entrance of Portsmouth Harbor, and extend Northeasterly and Southwesterly about 3 miles.

Isle of Shoals Lighthouse.

This Lighthouse, which shows a flashing Red and White Light, is situated upon the Southern end of White Island, which is the Southwestern Island of this group.

Bearings and Distances from Isle of Shoals Lighthouse.

		Distance.
Cape Cod Highland Light, . . .	S. by E., . . .	61 miles.
Thatcher's Island Lights, . . .	S. $\frac{3}{8}$ W., . . .	20 "
Newburyport Lights,	SW. by W., . . .	12 $\frac{1}{2}$ "
Whale's Back Light (entrance to Portsmouth Harbor),	N. by W. $\frac{3}{4}$ W., 6 $\frac{1}{2}$	"
Boon Island Lighthouse, . . .	NE. $\frac{1}{4}$ E., . . .	11 $\frac{1}{2}$ "

Dangers.

There are numerous Rocks and Ledges lying near these Islands, some of which extend more than $\frac{3}{4}$ mile from shore. The principal dangers, however, to be avoided in passing to the Eastward of them are Anderson's and Cedar Island Ledges, both of which are bare at Low Tide. Isle of Shoals Light bears from Anderson's Ledge, NW. by W. $\frac{1}{2}$ W., distance $\frac{7}{8}$ mile; from Cedar Island Ledge, W. by S., distance $1\frac{1}{4}$ miles. There is a Channel of 20 fathoms water between these Ledges and the Islands, but vessels passing to the Eastward of the Isles of Shoals should give these dangers a wide berth, as neither of them at this date are Buoyed. In passing to the Westward of these Islands, they may be approached at a distance of a mile from them without danger.

Isles of Shoals, or Gosport Harbor.

Remarks.

These Roads, which lie about **NE.** by **N.**, one mile from the Isle of Shoals Lighthouse, are situated between Hog and Smuttynose Islands on the Northeastward, and Cedar and Star Islands on the Southward, and only afford good shelter with winds from **N.NE.** to **SSW.** by way of East.

Sailing Directions for Isles of Shoals, or Gosport Harbor, in Daytime, with favorable winds and fair weather.

From the Southward leave the Isles of Shoals about 1 mile to the Eastward, and when the Lighthouse bears East, steer **N.NE.**, leaving Lunging Island (which is the first North of the Lighthouse) a little more than $\frac{1}{2}$ mile to the Eastward in order to avoid the Ledges which extend Northwesterly about $\frac{1}{4}$ mile from it. When the Northern part of this last-mentioned Island bears **SE.** $\frac{1}{2}$ **E.** about $\frac{1}{2}$ mile, steer **E.SE.** until the water shoals to 7 fathoms at Low Tide, and $8\frac{1}{2}$ at High Tide; then anchor. On the last course, the Red and Black Horizontal-striped Buoy on Halfway Rocks, which are nearly bare at Low Tide, will be left about 350 yards to the Southward. The Western part of Hog Island, the largest of the group, bears from this anchorage **NW.** by **N.** $\frac{1}{2}$ **N.** Or you may bring the Isle of Shoals Lighthouse to bear **N.** by **W.**, and run for it on this course. Leave the Lighthouse 200 or 300 yards to the Westward, and steer **N.** $\frac{1}{2}$ **E.** After passing it, you will see nearly ahead a Buoy having red and black horizontal stripes, which lies to the Southward of Halfway Rocks, which are nearly bare at Low Tide; and on the Port hand Lunging Island, which is small. Run in midway between the Buoy and Island, and when about 300 yards past the Buoy, haul in about **E.** by **S.** for the anchorage.

From Seaward you may bring the Isle of Shoals Light to bear **W.** by **N.**, and run for it, passing between Cedar Island and Anderson's Ledges. When about $\frac{1}{4}$ mile from the Lighthouse, steer about **N.** by **W.**, passing about midway between Buoy off Halfway Rocks and Lunging Island (which is the first island North of the Lighthouse, and its Eastern part is bold). After passing the Buoy off Halfway Rock, according to directions before given, haul in and anchor.

From Portsmouth, after passing the Buoy off Kitt's Rocks (which bears **S.** by **E.** from Whale's Back Light, distant $\frac{1}{3}$ mile), bring the said light to bear **NW.** by **N.** $\frac{3}{4}$ **N.**, and make good the course **SE.** by **S.** $\frac{3}{4}$ **S.**, leaving Hog Island (which is bold on its Western end, and is also the largest of the group) about 300 yards to the Eastward. After passing the Western part of this last-mentioned Island, run in and anchor as before directed.

From the Eastward give Duck Island, which is the Northeasternmost of the group, a good berth, in order to avoid the ledges which extend off from it in every direction. When the Isle of Shoals Lighthouse bears **S.** by **W.**, run for it. On this course the **SW.** Ledges, extending from Duck Island, will be left about $\frac{1}{2}$ mile on the Port hand, and Hog Island, which is quite bold, about $\frac{1}{4}$ mile also on the Port. After passing the Western part of this last-mentioned Island, haul in and anchor according to directions before given.

Passages between the Isles of Shoals.

Duck Island, which is surrounded by rocks and ledges, is the Northernmost of the group. Between this and Hog Island there is a Channel, having a width of more than $\frac{1}{2}$ mile, with from 7 to 10 fathoms water in it. Vessels passing through this Channel should keep nearest to Hog Island.

There is a Channel of 6 fathoms water between Hog and Smuttynose Islands, but it is so narrow that strangers should not attempt it except in cases of emergency. In such times keep nearest Smuttynose Island.

With **NW.** winds shelter may be found under the South side of Smuttynose Island. In coming in, pass to the Northward of Cedar Island Ledge and anchor close in to the shore, as there are 20 fathoms water $\frac{1}{4}$ mile to the Eastward of the Island. The Isle of Shoals Lighthouse bears from this anchorage **SW.** by **W.** $\frac{1}{2}$ **W.**; distance $1\frac{1}{2}$ miles.

High Water.

It is High Water at the Isles of Shoals 20 minutes before it is at Boston. Common Tides rise about 8 feet.

The Isles of Shoals Roads, or Gosport Harbor, is exposed to both Westerly and Northerly winds.

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Boon Island.

This is a small, low Rocky Island, lying about 10 miles North-easterly from the Isles of Shoals, and about 6 miles from the coast; it is destitute of all vegetation except grass.

Boon Island Lighthouse.

Upon this Island is erected a lofty Tower, which shows a fixed White Light.

Bearings and Distances from Boon Island Lighthouse.

	Distance.
Cape Cod (Highland Light), . . . S. $\frac{1}{4}$ E. . .	67 $\frac{1}{2}$ miles.
Thatcher's Island Lights, . . . S.S.W. . .	29 $\frac{1}{2}$ "
Whale's Back Lighthouse, (entrance to Portsmouth Harbor,) . . . W. $\frac{3}{4}$ S. . .	10 $\frac{1}{2}$ "
Cape Elizabeth Lights, . . . N.E. $\frac{3}{4}$ N. . .	29 "
Seguin Island Light, . . . N.E. $\frac{7}{8}$ E. . .	46 $\frac{1}{2}$ "
Monhegan Island Light, . . . N.E. by E. $\frac{7}{8}$ E. . .	63 "
Mount Desert Rock Light, . . . E. by N. $\frac{1}{4}$ N. . .	114 "

Dangers.***Pollock Rock.***

This Rock, which at this date (1879) is not buoyed, bears from Boon Island Lighthouse **W.S.W.**, distant a little more than $\frac{3}{4}$ mile; and at very Low Tides there are 15 feet of water upon it. Small vessels may approach within $\frac{1}{3}$ of a mile of Boon Island without danger, but heavy-draught vessels should give it a wide berth.

Boon Island Ledge.

This Ledge, which is bare at very Low Tides, is marked on its **SE.** part with a Buoy having Red and Black Horizontal stripes.* This Buoy bears from Boon Island Lighthouse **E. $\frac{3}{4}$ S.**; distance about 3 miles. 24 fathoms water was found 400 yards **SW.** from this Ledge; 30 fathoms $\frac{1}{2}$ mile North from it; and 13 fathoms $\frac{1}{3}$ mile East from it. The lead, therefore, gives but little warning in approaching it in thick weather or at night-time. About East from Boon Island $1\frac{3}{4}$ miles, are several rocky places, which break in rough weather. At very Low Tides as little as 24 feet water has been found upon some of them. Heavy-draught vessels should

* A Whistling Buoy, with the Letters B. I. L. upon it, has been moored off this Ledge.

not therefore attempt to pass between Boon Island Ledge and the Lighthouse.

York River.

The entrance to this River, which lies between Sweat's Point on the South, and East Point on the North, is about $5\frac{1}{2}$ miles North-easterly from Portsmouth entrance; **SW.** $\frac{1}{2}$ **W.** $2\frac{1}{2}$ miles from Cape Neddick Light; **W.** by **N.** $\frac{1}{2}$ **N.** $6\frac{3}{4}$ miles from Boon Island Lighthouse; and **NW.** by **N.** $\frac{1}{2}$ **N.** $2\frac{1}{2}$ miles from York Ledge Spindle. At this date (1879) there is no light at the entrance to this River.

Dangers.

The first danger to be met with in approaching this River is Black Rock, which lies on the Northern side of the Channel, and is marked with a Red Buoy, No. 2. This Buoy bears from East Point about **SW.** by **W.**, distant a little more than $\frac{1}{3}$ mile.

Sweat's Point Reef.

This Ledge, which extends off from Sweat's Point, is marked with a Black Buoy, No. 1.

Fort Point Rock.

This Ledge, which is dry at Low Tide, is marked with a Red Buoy, No. 4, which lies about 50 feet Southeast from the Rock.

Rock's Nose.

This is a ledge of Rocks bare at Low Tide, lying about $\frac{1}{4}$ mile above Sweat's Point, and extending off about 200 yards from the Southern shore of the River. In passing in, this danger is left on the Port hand.

Remarks.

The Channel leading into this River is both narrow and crooked, and vessels should enter it upon the flood, as in case of getting ashore they may, with the rising tide, get off again soon. About 8 feet water can be taken up to the anchorage at Low Tide.

The current of ebb sets strongly upon Stage Neck Point, which is opposite the narrowest part of this River; vessels, therefore, in rounding it, — especially with light winds, — should, if possible, keep in the middle of the River.

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Sailing Directions for York River in Daytime, with favorable winds and fair weather.

Coming from the Eastward, leave Cape Neddick Light, which bears NW. $\frac{1}{2}$ W. from Boon Island Light, about a mile to the Westward, and make good the course SW. by W., taking care not to approach nearer the shore than $\frac{1}{2}$ mile. When the River is fairly open, run in, leaving the Red Buoy off Black Rock on the Starboard and the Black Buoy off Sweat's Point on the Port hand. As you sail in, you will see another Red Buoy, which lies off Fort Point; leave this Buoy about 20 yards on the Starboard hand, and steer about W. $\frac{1}{2}$ S., with the Red Buoy off Stage Neck Point a little on the Starboard bow. On this last course, the ledge called the Rock's Nose will be left on the Port hand. Between this last-mentioned Ledge and the Northern shore of the River the Channel is very narrow; leave the last-mentioned Buoy on the Starboard hand and haul round Stage Neck Point in mid-channel, and run up for the first wharf on the Eastern side of the River, bearing NE. $\frac{1}{2}$ N., and anchor about 75 yards from it. If the wind should be light, with ebb tide, so that you cannot get up past Stage Neck Point, haul over and anchor in from 2 to 3 fathoms water, the point bearing NE. by E.; distance about 200 yards.

From the Southwestward, leave the Lighthouse upon the Whale's Back (entrance to Portsmouth Harbor) about $1\frac{1}{2}$ miles to the Westward, and steer NE. $\frac{1}{2}$ E., passing about midway between York Ledge and Stone's Rocks. When the Spindle upon York Ledge bears S.SE., run N.NW. until the River is fairly open; then run in as before directed.

High Water.

It is High Water at York River the same time as at Boston. Common tides rise about 8 feet.

Cape Neddick.

This prominent headland extends out about 1 mile SE. by E. from the main shore. At a distance of about 50 yards from the Eastern point of this Cape lies an Island called Cape Neddick Knubble, which at low water is connected by a sand bar with the shore. Upon this Knubble a Lighthouse is erected, which shows a

fixed Red Light.* Boon Island Lighthouse bears from Cape Neddick Light **SE.** $\frac{1}{4}$ **E.**, distance $5\frac{3}{4}$ miles; Cape Elizabeth Lights, **NE.** $\frac{1}{2}$ **E.** $28\frac{1}{2}$ miles; Isle of Shoals Lighthouse, **S.** by **W.** $\frac{3}{4}$ **W.**, 12 miles; Spindle upon York Ledge, **S.** by **W.**, $4\frac{1}{4}$ miles.

Remarks.

There is good anchorage on either side of this Cape. On the Northern side, vessels may find shelter with winds from **SW.** to **N.NW.** by way of West; and on the Southern side from West to **N.NE.** by way of West.

Sailing Directions for Cape Neddick Roads in Day-time, with favorable winds and fair weather.

Vessels from the Northward or Southward may leave Cape Neddick Light about $\frac{1}{2}$ mile to the Westward, and with Northerly winds anchor in about 6 fathoms water at low tide, and $7\frac{1}{2}$ at High Tide, the light bearing about **E.** by **N.**; distance $\frac{3}{4}$ mile. With Westerly winds, anchor in 6 fathoms water at Low Tide, and $7\frac{1}{2}$ at High Tide, the light bearing about South; distance $\frac{3}{4}$ mile.

The Coast from Whale's Back Light (entrance to Portsmouth Harbor) to Cape Neddick.

The principal dangers are the Sisters, Stone's Rocks, Murray's Rock, York Ledge, and the ledges to the Northeastward of York River. In order to avoid these dangers, vessels sailing from Whale's Back Light to Cape Neddick should not approach nearer than 1 mile to the shore. By following this last direction, Murray's Rock and York Ledge will be left more than a mile to the Eastward.

The Coast from Cape Neddick to Kennebunk River.

From Cape Neddick to entrance of Kennebunk River the course is **NE.** $\frac{3}{4}$ **N.**; distance about 12 miles. There are several creeks or small streams between these places, but they are of little importance to commerce. There are also several rocks off this part of the coast. To avoid these dangers, vessels should not approach the shore nearer than $1\frac{1}{4}$ miles.

* A Fog-bell is placed near this lighthouse.

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Kennebunk River.

The entrance to this River is $2\frac{1}{2}$ miles to the Westward of Capé Porpoise Lighthouse, and N. by E. $13\frac{1}{4}$ miles from Boon Island Lighthouse.

Lighthouses.

Upon the Eastern pier at the entrance of the River there was formerly a lighthouse, but it was destroyed by a fire some time since. At this date (1879) there is, therefore, no light at the entrance of this Harbor.

Dangers in approaching and entering Kennebunk River.

Fishing Rocks.

These dangerous Rocks, some of which are bare at half tide, are marked upon their Eastern part with an Iron Spindle, which bears S.S.W. from the Lighthouse Pier at the entrance of the River; distance $\frac{5}{8}$ mile. This Spindle, in entering Kennebunk River, is left on the Port hand.

Little Fishing Rocks.

These Rocks, which are awash at very Low Tides, are marked off their Southeast part with a Black Buoy, No. 3. The Lighthouse Pier bears from this Buoy N. $\frac{1}{2}$ E., distance $\frac{1}{2}$ mile; Spindle upon Fishing Rocks, West, about 200 yards. Bound into Kennebunk River, this Buoy is left on the Port hand.

*Seven-Foot Rock.**

About half a mile SE. from the Spindle upon Fishing Rocks is a dangerous Ledge, having at Low Tides but 7 feet water upon it. In order to avoid this Ledge, vessels bound into Kennebunk River should carefully watch the Spindle and Buoy upon Fishing Rocks. The pier at the entrance of the river should bear North before attempting to run in.

Remarks.

The entrance to this river is between two piers which were built for the purpose of improving the Channel. About 3 feet water at Low Tide, and 11 feet at High Tide, can be carried into this place; but strangers should not attempt to enter it without a pilot. Ves-

* A Black Buoy, No. 1, has been placed off the South side of this Rock.

sels may find shelter off the mouth of the river in from 3 to 4 fathoms water, with winds from West to North.

Sailing Directions for approaching Kennebunk River in Daytime, with favorable winds and fair weather.

From the Westward, leave Cape Neddick Light about $\frac{1}{2}$ mile on the Port hand, and make good the course **NE.** by **N.** until Cape Porpoise Lighthouse bears **NE.** by **E.**; then run for it, keeping a sharp lookout for the Spindle and Black Buoy off to the Eastward of the Fishing Rocks. As soon as these are made, bring the end of the pier on the Eastern side of the river to bear North, and run in, and anchor off the entrance of the river in from 3 to 4 fathoms water. On this last course, the Black Buoy off the Fishing Rocks will be left a short distance to the Westward, and buoy off Seven-foot Rock to the Eastward.

From the Eastward, when abreast Cape Porpoise Light, do not approach nearer the shore than one mile until you make the Spindle and Buoy off Fishing Rocks; then bring the Pier to bear North, and run in, leaving the Buoy and Spindle as before directed.

High Water.

It is High Water upon Kennebunk Bar about 15 minutes before it is at Boston. Common tides rise about 8 feet.

Cape Porpoise Harbor.

This small harbor of refuge, which lies between a number of Islands, is situated 16 miles Southwesterly from Cape Elizabeth, and Northeasterly 22 miles from the entrance to Portsmouth Harbor.

Goat Island Lighthouse.

This Lighthouse, which shows a fixed White Light, is built upon the Southwestern end of Goat Island, North side of entrance to this harbor. Cape Elizabeth Lights bear from Goat Island Lighthouse, **NE.** $\frac{3}{4}$ **E.**, distance 16 miles; Seguin Lighthouse, **E.NE.**, distance 36 miles; Boon Island Lighthouse, **S.** by **W.** $\frac{3}{4}$ **W.**, distance $14\frac{1}{4}$ miles; Cape Neddick Light **SW.**, distance 14 miles.

Dangers in approaching and entering Cape Porpoise Harbor.

The Old Prince.

This Ledge, which at very Low Tides has but 3 feet water upon it, extends nearly North and South 200 yards, and is marked upon its Southern part with a Red Buoy, No. 2. Goat Island Light bears from this Buoy about N.NW.; distance $\frac{1}{4}$ mile. In entering the harbor, this Buoy is left on the Starboard hand.

Goat Island Point Ledge.

This Ledge, which is bare at Half Tide, extends off about W.SW., 150 yards from the Southwestern point of Goat Island. The Western part, which is very bold, is marked with a Red Buoy, No. 4. Goat Island Lighthouse bears from this Buoy, NE. $\frac{1}{2}$ E.; distance about 225 yards. Bound into the harbor, this Buoy is left close to on the Starboard hand.

Folly Island Point Ledge.

About 350 yards W.SW. from Cape Porpoise Lighthouse is a small Island destitute of grass or trees, which is called Folly Island. The Channel leading into the harbor is between this Island and the Lighthouse.

A dangerous Reef extends off about S. by W., nearly $\frac{1}{3}$ mile from the Southern point of this Island, and for half that distance is bare at Low Tide. At this date (1879) there is no Buoy upon this danger, but the sea generally breaks upon it. In entering the harbor, this Ledge is left on the Port hand.

Gangway Rock.

This Ledge, upon which there are but 6 feet water at Low Tide, is marked upon its Northeastern part with a Black Buoy, No. 1. Goat Island Light bears from this Buoy E. $\frac{1}{2}$ N. $\frac{1}{2}$ mile. In passing in, this Ledge is left on the Port hand.

Remarks.

The Channel leading into Cape Porpoise is narrow, and the place for anchorage small, most of the harbor being dry at Low Tide; but with these disadvantages, it is sometimes of great importance, especially to vessels of light draught, when overtaken by a storm.

The holding ground is excellent, and when once into it, you may lie secure from all winds. The current of both Flood and Ebb in running in and out of this harbor sets strong in several places upon the Ledges. Strangers should not therefore attempt to pass in or out of it unless they have a fair and commanding breeze.

Sailing Directions for Cape Porpoise Harbor in Daytime, with favorable winds and fair weather.

From the Southwestward, leave Cape Neddick Light about $\frac{1}{2}$ mile to the Westward, and make good the course **NE. $\frac{1}{4}$ E.**, taking care not to approach nearer to Cape Porpoise than 1 mile. When Cape Porpoise Lighthouse bears **N. by W. $\frac{1}{4}$ W.**, run for it, keeping a sharp lookout for the Red Buoy off the Old Prince. Leave this Buoy 75 yards on the Starboard hand, and steer about **NW. by N.** for the Red Buoy off Southwest from the Lighthouse, leaving it on the Starboard hand close to. When abreast this last-mentioned Buoy, you will see to the Northward a pile of stones, surmounted by a pole, which stands upon a Dry Ledge (this is called the Pilot Beacon). Run in with this Beacon a little on the Starboard bow, and anchor with it bearing **E. by S.** in about 13 feet water at Low Tide. In very heavy weather, it is best to run upon the Flats, where you will ground, at Half Tide, soft, muddy bottom, and lie secure from all winds.

From the Northeastward, leave Wood Island Light about $1\frac{1}{2}$ miles to the Westward, and steer **SW.** until Cape Porpoise Light bears **N. by W. $\frac{1}{4}$ W.**; then run in, and follow the directions before given. Strangers should not attempt to beat out or into this harbor.

High Water.

It is High Water at Cape Porpoise Harbor 15 minutes before it is at Boston. Common Tides rise from 8 to 9 feet.

Stage Island Harbor.

This Harbor, which lies a short distance to the Northward of Cape Porpoise Light, is formed by a group of Islands lying off the main land. It will afford shelter for vessels of light draught, but strangers should not attempt to enter it without a pilot.

The Coast from Cape Porpoise to Wood Island.

From Cape Porpoise to Wood Island the course is **NE. $\frac{1}{2}$ E.**; distance $7\frac{1}{2}$ miles. There are several small streams between these places, but they are of no commercial importance. There are also several dangers lying off this part of the coast. Strangers should not therefore approach nearer than 1 mile to it.

Wood Island, or Winter Harbor.

This Harbor lies about 9 miles Southwest from Cape Elizabeth, and about 7 miles Northeast from Cape Porpoise Lighthouse.

Wood Island Lighthouse.

Upon the Eastern extremity of Wood Island is a Lighthouse which shows a flashing Red Light. A Fog Bell, struck by machinery, is placed near the Lighthouse, and is struck two blows in rapid succession; then a pause of 25 seconds, then a single blow.

Bearings and Distances from Wood Island Light.

		Distance.
Cape Elizabeth Lights, . . .	NE. $\frac{3}{4}$ E. . . .	$8\frac{1}{2}$ miles.
Seguin Island Light, . . .	E. by N. $\frac{3}{4}$ N. . . .	29 "
Monhegan Island Light, . . .	E. by N. . . .	48 "
Mount Desert Rock Light, . . .	E. $\frac{1}{4}$ N. . . .	100 "
Cape Porpoise Light, . . .	SW. $\frac{1}{2}$ W. . . .	$7\frac{1}{2}$ "
Boon Island Light, . . .	SW. by S. $\frac{1}{4}$ S. . . .	21 "
Cape Cod (Highland Light), . . .	S. $\frac{1}{2}$ W. . . .	86 "

Dangers in approaching and entering Wood Island Harbor by the Southern Passage.

Hussey's Rock.

This Rock, upon which there are but 5 feet water at Low Tide, is marked off its Southern side with a Black Buoy, No. 1. Wood Island Light bears from this Buoy **NE. by N. $\frac{1}{4}$ N.**; distance $1\frac{1}{2}$ miles. In passing in, this Buoy is left on the Port hand.

Dancebury Reef.

This Reef, upon which there is but 5 feet water, extends nearly 350 yards North and South, and is marked off its Southern part with a Red Buoy, No. 2. Wood Island Light bears from this Buoy N. $\frac{3}{4}$ W.; distance a little more than $\frac{1}{2}$ mile. At this date, this Ledge is not properly Buoyed, as the Channel between it and the shore is only 300 yards in width. It is therefore advisable for strangers to leave this Buoy at least 400 yards on the Port hand.

Dangers in approaching Wood Island Harbor by the Northern Passage.*Negro Island Ledge.*

This Ledge, upon which there is 8 feet water at Low Tide, is marked on its Northern side with a Black Buoy, No. 3. Wood Island Light bears from this Buoy SE.; distance $\frac{1}{2}$ mile. Between this Buoy and Wood Island there is a Channel 300 yards in width, having 4 fathoms water in it. The best and widest Channel, however, is to the Northward of this Buoy.

Remarks.

This harbor, which has from 8 feet to 3 fathoms water in it, lies between Stage and Negro Islands (the former of which has a Monument upon it 40 feet in height). About 12 feet water at Low Tide can be carried through the Channel South of Wood Island into the harbor; but strangers should only attempt this passage with fair winds, as it is very narrow in some places. The best Channel is to the Northward of the Island between the Black Buoy No. 3, on Negro Ledge, and the Red Buoy No. 6, off Ram Island Ledge. Between these two Buoys the Channel is about $\frac{1}{3}$ mile in width, and has a depth of 7 fathoms water at Low Tide. This harbor is exposed to Northerly winds, but vessels may run up into the Pool, where they will lie secure from all winds.

Sailing Directions for Wood Island Harbor in Day-time, with favorable winds and fair weather.*Ship Channel.*

From the Southwestward, leave Cape Porpoise Light 3 or 4 miles to the Westward, and make good the course NE. $\frac{1}{2}$ E. until

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Wood Island Lighthouse bears **NW.**; then run in about **NW.** $\frac{1}{2}$ **N.**, leaving the Lighthouse about $\frac{1}{4}$ mile upon the Port hand. When this Lighthouse bears **W.SW.**, you will see about $\frac{1}{2}$ mile to the Westward the Black Buoy off Negro Ledge; haul round this Buoy at a distance of 250 yards from it, leaving it to the Southward. When abreast this Buoy, you will see, about $\frac{1}{3}$ mile to the Southward, Negro Island, which is small; and also Stage Island, with a Monument upon its Northeastern part. Run in, and anchor about midway between this last-mentioned Island and the Red Buoy off the Southern Point of Negro Island, in from $2\frac{1}{2}$ to 4 fathoms water, the Monument bearing about **NW.** by **W.**

From the Eastward, after passing the Ledges off Cape Elizabeth, or Cape Elizabeth Lights, bear **N.** by **E.** $\frac{1}{2}$ **E.**; bring Wood Island Lighthouse to bear from **W.** to **W.SW.**, and run for it on this course. When about a mile from this Light, steer **NW.** by **W.**, leaving the Black Buoy off Negro Ledge upon the Port hand. Continue the course **NW.** by **W.** until the Monument upon Stage Island bears **W.SW.**; then run into the harbor. When abreast of the Black Buoy off Negro Ledge (which is left on the Port hand), steer more Southerly, and anchor in from $2\frac{1}{2}$ to 4 fathoms water, midway between the Monument and Red Buoy off to the Southward of Negro Island.

Directions to run in to the Southward of Wood Island.

Steer **NE.** $\frac{1}{2}$ **E.** from Cape Porpoise, as before directed, until Wood Island Light bears **NW.** by **N.**; then run for it upon this course, leaving the Buoy off Dancebury Ledge (before described) about $\frac{1}{4}$ mile upon the Port hand. When about $\frac{1}{4}$ mile from the Lighthouse, you will be past the Northern part of this Ledge, and must steer about **W.** by **N.** $\frac{1}{4}$ **N.**, keeping about 200 yards from the Southern part of Wood Island. As you sail in, you will see the Red Buoy which lies a short distance to the Southward of Negro Island. Leave this Buoy about 100 yards on the Starboard hand, and anchor in about $2\frac{1}{2}$ fathoms at Low Tide, about midway between the Buoy and Monument. Vessels of more than 10 feet draught should not attempt this passage at Low Tide, or with winds ahead.

Directions to enter the Pool.

If it blows strong from the Northeast, when midway between the Monument upon Stage Island and the Buoy off the Southern part of Negro Island, steer about **SW.**, leaving the Spindle upon Half-tide Rock 150 yards on the Port hand. When the entrance (which is about 100 yards in width) is fairly open, run in midway, and anchor as soon as you are through it. From the outer anchorage about 8 feet water, at Low Tide, can be taken into the Pool. The current of Flood and Ebb sets strong in and out directly through this passage.

Strangers should not attempt to enter Wood Island Harbor at night.

High Water.

It is High Water at Wood Island about 30 minutes before it is at Boston. Common Tides rise about 9 feet.

Saco River.

To enter this River, leave Wood Island Light about $\frac{1}{2}$ mile to the Southward, and steer **W.** by **N.** As you sail in, you will see the Black Buoy off Negro Ledge; leave this Buoy 150 yards on the Port hand, and steer **W.** by **N.**, leaving the Red Buoy, No. 6, off Ram Island Ledge, and the Red Buoy, No. 8, off Sharp's Rocks, both to the Northward. When abreast the last-mentioned Buoy, you will see the lower bar Buoy, which is painted in Black and White perpendicular stripes. This last Buoy lies at the entrance of the river; in entering, the Channel is to the Westward of the Breakwater. It is advisable for vessels bound to Saco to enter Wood Island Harbor and take pilots, as the frequent changes of the bar at the mouth of the river render it impossible to give any correct sailing directions. It is High Water upon Saco Bar the same time as at Wood Island Harbor.

From the mouth of the River to Saco or Biddeford the distance is from 3 to 4 miles.

Islands in Saco Bay.

Ram Island.

This Island, which is very small, bears from Wood Island Light **NW.** $\frac{1}{2}$ **W.**, distance $1\frac{1}{2}$ miles, and lies Northeast about $\frac{1}{4}$ mile from the Buoy on the Bar at the entrance of Saco River. This

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Island is surrounded by shoals, and vessels should give it a good berth.

Eagle Island.

This Island is small, and bears from Wood Island Lighthouse NW. by N. $\frac{1}{4}$ N., distance 2 miles, and lies about 1 mile from shore. Vessels of 11 feet draught may, at Low Tide, approach it at a distance of $\frac{1}{3}$ mile without danger.

Stratton and Bluff Islands.

These two Islands, which lie near each other, bear from Wood Island Lighthouse about N.NE.; distance 3 miles. Sunken rocks extend off $\frac{1}{3}$ mile to the Eastward of these Islands, and vessels bound to Old Orchard Beach should give them a berth of at least $\frac{1}{2}$ mile. There is no passage for vessels between these two last-mentioned Islands.

Richmond's Island Roads.

These Roads lie $2\frac{1}{2}$ miles Southwesterly from Cape Elizabeth Lights, and $6\frac{1}{4}$ miles Northeast from Wood Island Lighthouse.

Dangers.

There are not really any dangers to be avoided in entering these Roads. There are two Rocks, called the Old Proprietor and Chimney Rock, both of which lie on the Northwestern side, and are buoyed. The Old Proprietor, which is bare a little before Low Tide, bears W. by N. from the Western part of Richmond's Island; distance 2 miles. Chimney Rock is bare at Low Tide, and bears, from the Western part of Richmond's Island, NW. by N. $\frac{1}{2}$ N., about $\frac{2}{3}$ mile. Neither of these rocks lie in the way, except you are obliged to beat in.

Remarks.

These Roads make an excellent harbor with winds from West to North by way of West, and can be easily entered in daytime, even by the largest vessels, when they cannot get into Portland. The holding-ground is good, and I can see no reason why a large vessel, anchoring in from 7 to 8 fathoms water, could not safely ride out a heavy Northeast gale.

Sailing Directions for Richmond's Island Roads, in Daytime, with favorable winds and fair weather.

Coming from the Westward, leave Wood Island Light about $1\frac{1}{2}$ miles to the Northwestward, and as soon as Cape Elizabeth Light-houses are made bring them to bear **NE.** and run for them until the Western part of Richmond's Island bears North; then run in about **N. by W.** $\frac{1}{2}$ **W.**, and haul round the West part of Richmond's Island at a distance of $\frac{1}{2}$ mile (leaving it to the Eastward), and anchor in from 4 to 6 fathoms water, good holding-ground. The best anchorage for large vessels is $\frac{1}{4}$ mile **S.SE.** from the Black Buoy off Chimney Rock. Small or light-draught vessels may go up to the head of the cove and anchor at their pleasure.

From the Northeastward.

Coming from the Northeastward, bring the Lighthouse upon Half-way Rock to bear **NE.** by **E.** $\frac{1}{4}$ **E.**, and make good the course **SW.** by **W.** $\frac{1}{4}$ **W.** On this course the Black Buoy off Taylor's Reef (bearing **SE.** $\frac{1}{4}$ **S.** from Cape Elizabeth Lights, distance $\frac{3}{4}$ mile) will be left about $\frac{1}{3}$ mile on the Starboard, and Alden's Rock about $\frac{3}{4}$ mile upon the Port hand. When Cape Elizabeth Lights bear **N.NE.**, haul round Richmond's Island at a distance of $\frac{1}{2}$ mile, and anchor as before directed. In order to avoid the Ledges in beating in, do not approach nearer to Richmond's Island than $\frac{1}{2}$ mile, until past the Western point. The first Cove to the Westward of Cape Elizabeth Lights is Seal Cove, which is full of Rocks and Ledges. Strangers should therefore be careful and not mistake this for Richmond's Island Roads. The centre of Richmond's Island bears from Cape Elizabeth Lights **SW.** by **W.** $\frac{1}{2}$ **W.**, distance 2 miles; and the passage into the Roads is to the Westward of this Island.

Portland Harbor.

This harbor, which is the principal maritime port of the State of Maine, lies 42 miles Northeast from the city of Portsmouth, and 62 miles Northeasterly from Cape Ann.

Cape Elizabeth Lights.

Upon Cape Elizabeth are erected two lofty Light Towers, painted brown, with white masonry bases, 923 feet apart, ranging SW. by W. and NE. by E. The Eastern Tower shows a fixed White Light; the Western, a flashing White Light. A Fog Signal is placed near the Lighthouses, giving two blasts of 5 seconds each, with an interval of 8 seconds between them, and then a pause of 42 seconds.

Bearings and Distances from Cape Elizabeth Lights.

		Distance.
Cape Cod (Highland Light),	S. $\frac{3}{4}$ W.,	92 miles.
Thatcher's Island Lights,	SW. by S. $\frac{1}{2}$ S.,	58 $\frac{1}{2}$ "
Boon Island Light,	SW. $\frac{3}{4}$ S.,	29 "
Seguin Island Light,	E. by N.,	21 "
Monhegan Island Light,	E. $\frac{3}{8}$ N.,	40 "
Matinicus Island Lights,	E. $\frac{1}{4}$ S.,	59 "
Seal Island Light (Cape Sable),	E. by S. $\frac{3}{4}$ S.,	181 "
Half-way Rock Light,	E. NE.,	9 "
Portland Light,	N. $\frac{3}{4}$ E.,	3 $\frac{1}{2}$ "

Half-Way Rock Light.

This Lighthouse, which shows a fixed White Light varied by Red flashes, is built upon a small rocky Islet, called Half-way Rock. Webster Rock, upon which there are 8 feet water at Low Tide, bears from this Light North; distance 450 yards. This Rock is marked on its Northern part with a Black Buoy, No. 7. There is no passage for vessels between this Rock and the Lighthouse. Rocks also extend off nearly $\frac{1}{4}$ mile to the Westward of this Light.

Bearings and Distances from Half-way Rock Light.

		Distance.
Cape Elizabeth Lights,	W. SW.,	9 miles.
Portland Head Light,	W. $\frac{1}{8}$ S.,	7 $\frac{3}{4}$ "
Seguin Island Light,	E.,	12 $\frac{1}{2}$ "

Since the above was written, a Whistling Buoy has been placed off Half-way Rock Lighthouse, in 19 fathoms water.

Bearings and Distances from this Buoy.

Half-way Rock Lighthouse,	North 1 mile.
Portland Lighthouse,	W. $\frac{1}{2}$ N. 8 miles.
Seguin Lighthouse,	E. $\frac{1}{2}$ N. 12 "

Portland Head Light.

This Lighthouse, which shows a fixed White Light, is built on Portland Head. A Fog Signal is placed near it which gives blasts of 8 seconds at intervals of 40 seconds. Half-way Rock bears from Portland Head Light **E. $\frac{1}{8}$ N.**; distance $7\frac{3}{4}$ miles.

Portland Breakwater Light.

This Lighthouse, which shows a flashing Red Light, is erected upon the outer end of the Breakwater, which, in entering Portland Harbor, is left on the Port hand.

Dangers to be avoided in Passing Cape Elizabeth by the Inshore Channel.***Old Anthony, or Vapor Rock.***

This Rock, which has 18 feet water upon it at very Low Tides, is marked on its Southern part with a Buoy painted in Red and Black Horizontal stripes, and also having the white letters **O. A.** upon it. Cape Elizabeth Eastern Light bears from this Buoy **N. by W. $\frac{1}{2}$ W.**; distance $1\frac{3}{4}$ miles. Vessels passing Cape Elizabeth by the Inshore Channel will leave this Buoy to the Southeastward.

Taylor's Reef.

This Reef, which at very Low Tides has 11 feet water upon it, extends **E.NE.** and **W.SW.** nearly $\frac{1}{2}$ mile. It is marked upon its Southeastern part with a Black Buoy, having the white letters **T. R.** upon it. Cape Elizabeth Eastern Light bears from this Buoy **NW. $\frac{1}{4}$ N.**; distance $\frac{3}{4}$ mile. Vessels passing Cape Elizabeth by the Inshore Channel generally leave this Buoy to the Northwestward; but there is a good Channel of 6 fathoms water inside this Reef close to the Cape Shore.

Alden's Rock.

This dangerous Rock, which at very Low Tides has but 4 feet water upon it, is marked with a Black Buoy having the white letters **A. R.** upon it. This Buoy lies about $\frac{1}{4}$ mile Southeast from the Rock. Cape Elizabeth Eastern Light bears from it **NW. by W.**; distance $2\frac{1}{4}$ miles. Vessels passing Cape Elizabeth by the Inshore Channel should leave this Buoy at least $\frac{3}{4}$ mile to the Southeastward.

Corwin Rock.

This Rock, upon which there are 18 feet water at Low Tide, is marked upon its Southern part with a Buoy painted in Black and Red Horizontal stripes, and also having the white letters C. R. upon it. Cape Elizabeth Eastern Light bears from this Buoy NW. by W. $\frac{3}{4}$ W.; distance $2\frac{1}{2}$ miles. Vessels passing Cape Elizabeth by the Inshore Channel should leave this Buoy to the Southeastward.

West Cod Ledge.

This Ledge (which at this date is not Buoyed) has $4\frac{1}{2}$ fathoms water upon it at Low Tide. Cape Elizabeth Eastern Light bears from it W. $\frac{1}{2}$ N.; distance a little over 3 miles. Vessels passing Cape Elizabeth by the Inshore Channel should leave this Ledge to the Southeastward.

Mitchell's Rock.

This Rock (which at this date is not Buoyed) has $5\frac{1}{4}$ fathoms water upon it at Low Tide. Vessels bound around Cape Elizabeth by the Inshore Channel generally pass to the Eastward of it. This Rock is not considered dangerous except in rough weather, when the sea breaks heavily upon it. Cape Elizabeth Eastern Light bears from this Rock W. $1\frac{1}{3}$ miles.

Broad Cove Rock.

This Rock, which has about 7 feet water upon it, is marked off its Eastern part with a Black Buoy having the white letters B. C. R. upon it. Cape Elizabeth Eastern Light bears from this Buoy SW.; distance $1\frac{1}{4}$ miles. Vessels passing Cape Elizabeth by the Inshore Channel must leave this Buoy to the Westward.

Trundy Reef.

This Reef extends off about $\frac{3}{4}$ mile in a Northeasterly direction from Trundy Point. Trundy Point is $1\frac{1}{4}$ miles to the Northward of Cape Elizabeth Lights. The Reef is dry at Low Tide, about $\frac{1}{2}$ mile from shore. A Black Buoy, having the white letters T. R. upon it, is placed off the Northeast part of this Reef. Cape Elizabeth Eastern Light bears from it SW. by S. $\frac{1}{2}$ S.; distance $1\frac{1}{2}$ miles. Rocky Bottom extends off to the Northeast of this Reef, and the current of Flood sets on to it. Large vessels should there-

fore give it a wide berth. Portland Light bears from it N. by W. $\frac{1}{4}$ W.; distance $1\frac{3}{4}$ miles.

Dangers to be avoided in passing Cape Elizabeth by the Offshore Channel.

West Hue and Cry.

This Ledge (which is not Buoyed at this date) has $4\frac{1}{2}$ fathoms water upon it at Low Tide. Cape Elizabeth Eastern Light bears from it N.NW. $2\frac{3}{4}$ miles.

East Hue and Cry.

This is a dangerous Ledge with 16 feet water upon it at Low Tide. It is marked upon its Southeastern part with a Black Buoy, No. 1. Cape Elizabeth Eastern Light bears from this Buoy NW. $\frac{3}{4}$ N.; distance $3\frac{1}{4}$ miles. Vessels passing Cape Elizabeth by the Offshore Channel will leave this Buoy to the Northwestward.

Bache Rock.

This Rock (which is not Buoyed at this date) has 4 fathoms water upon it at Low Tide. Cape Elizabeth Eastern Light bears from this Rock, W. $\frac{1}{2}$ S., distance 5 miles; Portland Head Light, NW. by W., $5\frac{1}{2}$ miles. In Easterly gales the sea breaks heavily upon this Rock.

Round Rock.

This Rock (which is not Buoyed at this date) has $4\frac{1}{2}$ fathoms water upon it at Low Tide. Cape Elizabeth Eastern Light bears from this Rock W. $\frac{1}{4}$ S.; distance $7\frac{1}{4}$ miles.

Bulwark Shoal.

This dangerous Ledge, which has but 12 feet water upon it at very Low Tides, is marked upon its Southeastern part with a Buoy painted in red and black horizontal stripes. Cape Elizabeth Eastern Light bears from this Buoy W. $\frac{1}{2}$ S., $6\frac{1}{4}$ miles; Light upon Half-way Rock, NE. by N., $3\frac{3}{4}$ miles; Portland Head Light, NW. by W. $\frac{3}{4}$ W., distance $6\frac{1}{2}$ miles. Heavy-draught vessels passing Cape Elizabeth, bound to Portland, should give all these Ledges a wide berth, leaving them to the Northwestward.

Dangers to be avoided in approaching and entering Portland Harbor.

Jordan's Ledge, or Bell Rock.

This Ledge, upon which there are 18 feet water at Low Tide, is marked upon its Southeastern part with a Buoy painted in Red and Black Horizontal stripes. Portland Head Light bears from this Buoy NW. by W.; distance 1 mile.

Pine-Tree Ledge.

This Ledge, which has 20 feet water upon it at Low Tide, is not Buoyed at this date. Portland Head Light bears from it NW. $\frac{1}{4}$ W.; distance $1\frac{1}{2}$ miles nearly. The sea breaks heavily upon this Ledge during heavy Southeasterly gales.

Witch Rock.

This Rock, upon which there are 18 feet water at Low Tide, is marked off its Southeastern part with a Red Buoy having the white letters W. R. upon it. Portland Head Light bears from this Buoy W. by N., $1\frac{1}{2}$ miles; the Buoy upon Jordan's Reef bears W. by S. $\frac{3}{4}$ S.; distance $\frac{3}{4}$ mile from the Buoy upon Witch Rock. The Ship Channel into Portland is between these two Buoys.

Ram Island Ledge.

This Ledge, which extends off to the Southward about $\frac{1}{4}$ mile from the Southwestern part of Ram Island, is marked upon its outer part with a Day Beacon 50 feet in height. Portland Head Light bears from this Beacon W. by S. $\frac{1}{4}$ S.; distance about 1 mile. In passing into Portland, this Beacon is left on the Star-board hand.

Catfish Rock.

This Rock, which has 18 feet water upon it at Low Tide, lies 150 yards from the Southwestern part of Bang's Island. A Red Buoy, No. 2, is placed near it. Portland Head Light bears from this Buoy S. by W. $\frac{1}{4}$ W.; distance $\frac{5}{8}$ mile.

Bang's Island Ledge.

This Ledge, which has 2 feet water upon it at Low Tide, lies near the Northwestern part of Bang's Island, and is marked upon its Northwestern part with a Red Buoy, No. 4.

Mill Rock.

This Rock, which lies near the Western shore, about $\frac{1}{2}$ mile to the Southward of Fort Preble, has 2 feet water upon it at Low Tide, and is marked off its Northeast part with a Black Buoy, No. 11.

Spring Point Ledge.

This Ledge, some parts of which are bare at Low Tide, extends off Northeast 350 yards from Fort Preble. It is marked on its outer part with a Black Buoy having the white letters S. P. L. upon it. Portland Breakwater Light bears from it NW. by W.; distance $\frac{3}{4}$ mile.

Staniford's Ledge.

This Ledge extends off NE. by E. 250 yards from Portland Breakwater Light. It is marked upon its outer part with a Black Buoy having the white letters S. L. upon it.

Portland Harbor Rocks.

These Rocks, which lie in the harbor upon the Southern side of the Channel, have but 4 feet water upon them at Low Tide. They are marked upon their Northwestern part with a Black Buoy, No. 3. Portland Breakwater Light bears from this Buoy E. by N.; distance a little more than $\frac{1}{2}$ mile.

Remarks.

On account of the Ledges that lie off its entrance, the approaches to Portland Harbor are exceedingly dangerous for large vessels. Small ones should give Alden's Rock, upon which there are but 4 feet water at Low Tide, a wide berth. The heaviest draught vessels may enter the Outer Harbor at Low Tide; and 21 feet water, at this date, can be carried into the Inner Harbor at this time of Tide.

Sailing Directions for Portland Harbor in Day-time, with favorable winds and fair weather.**Cape Elizabeth Inshore Channel.**

Coming from the Southwestward, as soon as Cape Elizabeth Lights are made, bring them to bear from NE. by N. to N.NE., and run for them. On this course, as you approach these Lighthouses, you

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will see, on the Starboard bow, the Black Buoy off Taylor's Reef, which has about 11 feet water upon it at Low Tide. (Cape Elizabeth Eastern Light bears from this Buoy **NW.** $\frac{1}{4}$ **N.**; dist $\frac{3}{4}$ mile.) As soon as this Buoy is made, you will remember that you can pass it on either side. If you intend to go within it, you must keep midway between the Buoy and shore, and there will be no danger. If you wish to go without it, when it bears **NE.** by **E.**, steer for it and leave it close to on the Port hand. When abreast this Buoy (which may be known by the white letters T. R. upon it, and also by the bearings of Cape Elizabeth Eastern Light) steer **N.NE.** until Portland Head Light bears **NW.** by **N.** $\frac{1}{4}$ **N.**; then run for it. On these two last courses, you will leave the Black Buoys on Broad Cove Rock and Trundy Reef both on the Port, and the Buoy painted in Red and Black Horizontal Stripes, off Jordan's Reef, on the Starboard hand. After passing this last-mentioned Buoy, or, you are about $\frac{3}{4}$ mile from Portland Head Light, steer more Northerly, leaving the Lighthouse $\frac{1}{4}$ mile to the Westward. When abreast it, you will see the Red Buoy off the Southwest part of Bang's Island. Leave this Buoy 200 yards on the Starboard hand, and run up about **N.** $\frac{3}{4}$ **W.** in midchannel, leaving the Black Buoy off Fort Preble close to on the Port hand. When abreast this Buoy, you will see to the Northwestward another Black Buoy, which lies off Portland Breakwater Light, and also a Red Buoy; pass midway between them and run in, keeping nearest to the city side of the harbor.

Channel between Corwin Rock and West Cod Ledge.

Coming from Seaward or the Southward, do not approach nearer Cape Elizabeth than 4 or 5 miles, or keep outside all the Buoys upon the Ledges until Portland Head Light bears **NW.** by **N.** $\frac{1}{4}$ **N.**; then run for it on this course, leaving the Buoy painted in Black and Red Horizontal Stripes, off Corwin Rock, a little more than $\frac{1}{2}$ mile on the Port hand. When about $\frac{3}{4}$ mile from Portland Head Light, follow the directions before given.

Ship Channel.

From Seaward or the Southward, do not approach nearer Cape Elizabeth than 10 miles until the Light upon Halfway Rock (before described) is made; then bring this Light to bear North, and run

for it until Portland Head Lighthouse bears **W. by N. $\frac{3}{4}$ N.**; then run for this last-mentioned Lighthouse on this course until about $\frac{1}{4}$ mile from it, and proceed according to directions before given. This last course (**W. by N. $\frac{3}{4}$ N.**) passes $\frac{3}{4}$ mile to the Northeastward of the Buoy upon Bulwark Shoal, and about midway, in 9 fathoms water, between the Buoys upon Jordan's Reef and Witch Rock.

Northern Channel.

Coming from the Eastward, leave Seguin Lighthouse 3 or 4 miles to the Northward, and bring the Lighthouse upon Halfway Rock to bear **W. by N.**, leaving it about $\frac{3}{4}$ mile to the Northward. When past this last-mentioned Lighthouse, bring Portland Head Light to bear **W. $\frac{1}{4}$ N.**, and run for it upon this bearing until $\frac{1}{4}$ mile from it; then follow the directions before given. Upon this last course (**W. $\frac{1}{4}$ N.** from Halfway Rock), Outer Green Island and the Beacon upon Ram Island Ledge will both be left to the Northward; and the Red Buoy off Witch Rock $\frac{1}{4}$ mile to the Southward.

White Head Passage.

Remarks.

The narrow channel leading into Portland Harbor between the Northern shore of Bang's Island and the Southern shore of Peak's Island is called White Head Passage. Strangers should not attempt to pass in or out this channel unless they have a fair wind, and in no case with light winds, as there is danger of being carried ashore by the current, upon the Ledges.

Sailing Directions.

From the Eastward, to enter Portland Harbor by White Head Passage, leave the Lighthouse on Halfway Rock about $\frac{1}{2}$ mile to the Northward, and steer about **W. $\frac{1}{4}$ N.** until the first Island (Outer Green Island) bears North; then steer about **W.NW.**, leaving Ram Island on the Port hand. As you sail in, you will see two Spindles in the passage; pass midway between them and run in, keeping the Southern shore best aboard. You may go on either side of House Island. If you pass to the Southward of it keep nearest to it, in order to avoid the shoal water that extends off

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some distance from the Northern part of Bang's Island. There are from 4 to 6 fathoms water in White Head Passage between Bang's and Peak's Islands; but the Channel is narrow; it is therefore advisable to proceed with caution.

Hog Island Roads, or Portland Outer Harbor.

When abreast of Portland Head Light, if you wish to make a harbor, follow the directions before given for Portland Inner Harbor, until abreast the Black Buoy off Fort Preble; then steer **NE.** until Portland Breakwater Light bears West, then steer East, and anchor midway between Little Hog and House Islands, in about 5 fathoms water at Low Tide. During heavy Northeasterly gales, Hog Island Roads affords better shelter than Portland Inner Harbor.

Sailing Directions for Portland Harbor at Night-time, with favorable winds and fair weather.

A Whistling Buoy is placed off Cape Elizabeth in 18 fathoms water. Cape Elizabeth Eastern Light bears from it about **N.** by **W.** $\frac{1}{4}$ **W.**, distance $2\frac{1}{4}$ miles; Buoy off Old Anthony, **N.NE.**, distance about $\frac{1}{2}$ mile; Alden's Rock, **NE.** $\frac{1}{2}$ **E.**, distance $1\frac{3}{4}$ miles.

From the Southward or Southwestward, do not approach Cape Elizabeth nearer than 5 miles until Cape Elizabeth Eastern Light bears **N.** by **W.**; then run for it, keeping a sharp lookout for the Whistling Buoy. When you make or hear it, leave it close to on the Port hand, and steer **NE.** by **N.** $\frac{1}{2}$ **N.** On this course, Alden's Rock will be left $\frac{1}{2}$ mile on the Starboard hand. Continue the course **NE.** by **N.** $\frac{1}{2}$ **N.** until Portland Head Light bears **NW.** by **N.** $\frac{1}{4}$ **N.**; then run for it on this course, and pass it on the Port hand close to. When abreast of this Light, run about **N.** by **W.**, keeping in mid-channel until about half-way from Portland Head Light to Breakwater Light; then haul a little more Northerly, keeping nearer Fort Scammel* in order to avoid the Ledge off Fort Preble. When the Breakwater Light bears **W.** by **N.** $\frac{1}{2}$ **N.**, you are past this Ledge, and may haul in **NW.** and round this last-mentioned Light at a distance of $\frac{1}{4}$ mile, and anchor nearest the city side. If

* Fort Scammel is upon House Island, and in passing in is left on the Starboard hand.

the night is very dark, after passing Fort Preble, use the lead, and do not go into less than $3\frac{1}{4}$ fathoms water until the Breakwater Light bears **S.SW.**; then haul in for the city.

Hog Island Roads, or Portland Outer Harbor.

If you do not like to pass the Breakwater Light at night, when between Fort Preble and Fort Scammel, run **N.** by **E.**, and anchor in from 5 to 7 fathoms water, the Breakwater Light bearing West; distance about $\frac{3}{4}$ mile.

Channel between Corwin Rock and West Cod Ledge.

The channel between this Rock and Ledge is $1\frac{1}{4}$ miles in width, and the heaviest-draught vessels may safely pass through it at night, provided there is no error in their compass.

Coming from the Southward, do not approach nearer Cape Elizabeth than 4 or 5 miles, and as soon as you make Portland Head Light bring it to bear **NW.** by **N.** $\frac{1}{4}$ **N.**, and run for it, leaving this Light 250 yards, or close to, on the Port hand, and proceed according to directions before given.

Ship Channel.

From Seaward or the Southward, do not approach nearer Cape Elizabeth than 10 miles until the Light upon Halfway Rock is made; then bring this Light to bear North, and steer for it until Portland Head Light bears **W.** by **N.** $\frac{3}{4}$ **N.**; then run for it on this course, until about $\frac{1}{4}$ mile from it, and proceed as before directed. This last course (**W.** by **N.** $\frac{3}{4}$ **N.**) passes $\frac{3}{4}$ mile to the Northeastward of the Buoy upon Bulwark Shoal, and about midway in 9 fathoms water between the Buoys upon Jordan's Reef and Witch Rock.

Northern Channel.

From the Eastward, as soon as the Light upon Halfway Rock is made, bring it to bear **W.** by **N.** (which course will clear all the Ledges), and run for this Light, leaving it about $\frac{3}{4}$ mile to the Northward. When abreast this last-mentioned Lighthouse, bring Portland Head Light to bear **W.** $\frac{1}{4}$ **N.**, and steer for it on this bearing until $\frac{1}{4}$ mile from it, or close to it; then follow the directions before given. Upon this last course (**W.** $\frac{1}{4}$ **N.** from Halfway

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Rock), Outer Green Island and the Beacon upon Ram Island Ledge will both be left to the Northward, and the Buoy off Witch Rock $\frac{1}{4}$ mile to the Southward.

Beating into Portland Harbor at Night.

At night or day, vessels of not more than 13 feet draught, from the Southwestward, with strong **NW.** winds, at Half Tide, may, as soon as Cape Elizabeth Lights are made, bring them to bear from **NE.** by **N.** to **N.NE.**, and run for them on this bearing, leaving the Cape Shore about $\frac{1}{4}$ mile to the Northwestward. When Cape Elizabeth Eastern Light bears **NW.** by **W.**, steer **NE.** by **N.** until Portland Head Light bears **NW.** by **N.** $\frac{1}{4}$ **N.**; then haul sharp on the wind, or for this last-mentioned Light. In passing Cape Elizabeth at Half Tide, the only danger for vessels of not more than 13 feet draught is Alden's Rock. Remember this Rock bears from Cape Elizabeth Eastern Light **SE.** by **E.**; distance 2 miles.

At night or day, after passing Cape Elizabeth Lights by the Inshore Channel, vessels of not more than 15 feet draught may stand to the Eastward until Portland Head Light bears **W.** $\frac{1}{2}$ **N.**, and to the Westward until it bears **NW.** by **N.** $\frac{1}{4}$ **N.** At night, vessels beating in may stand pretty close to the Western shore, after passing Portland Head Light, until abreast of the Southern end of Bang's Island. After passing this to Fort Preble, give the Western shore a wide berth; and in order to avoid the Ledge that makes off from this Fort, when passing it, keep nearest to House Island.

Ship Channel.

Beating into Portland Harbor in Ship Channel at night or day, when Halfway Rock Light bears North, you may stand to the Northward until Portland Head Light bears **W.** $\frac{1}{2}$ **N.**, and to the Southward until it bears **W.** by **N.** $\frac{3}{4}$ **N.** When Cape Elizabeth Lights bear **SW.**, heavy-draught vessels may anchor, and wait for daylight in order to pass Jordan's Reef and Witch Rock.

Sailing Directions for approaching and entering Portland Harbor in Thick Weather.

A Whistling Buoy is placed in 18 fathoms water, bearing about **S.** by **E.**, $\frac{1}{4}$ **E.** $2\frac{1}{4}$ miles from Cape Elizabeth Eastern Light. Fog Signals are also placed at Cape Elizabeth and Portland Head Light.

Vessels from the Southwest, Southward, or Seaward, making or hearing the Whistling Buoy off Cape Elizabeth, will run for it, bearing from **NW.** to **NE.** Leave it close to on either hand, and make good the course **NE.** by **N.** $\frac{1}{2}$ **N.** until the Fog Signal upon Cape Elizabeth (before described) bears **W.** by **S.** $\frac{1}{2}$ **S.** (Portland Head Light will then bear **NW.** by **N.** $\frac{1}{4}$ **N.**, distance $3\frac{1}{4}$ miles); then run for Portland Head Light on this last bearing, and when you hear the Fog Signal near this Lighthouse, pass it close to in 7 or 8 fathoms water, and steer about **N.** by **W.**, keeping in not less than 7 or 8 fathoms water until past Fort Preble, when you may haul more Westerly, and round the Lighthouse in not less than $3\frac{1}{2}$ fathoms, and anchor.

Vessels from the Eastward making or hearing the Whistling Buoy which lies about South 1 mile from the Light upon Halfway Rock, may leave it close to on either hand, and make good the course **W.** $\frac{1}{2}$ **N.** for Portland Head Light. As soon as the Fog Signal is heard at this Lighthouse, bring it to bear **W.** $\frac{1}{2}$ **N.**, and run for it on this bearing, and follow the directions before given.

High Water.

It is High Water in Portland Harbor 12 minutes before it is at Boston. Common Tides rise about 9 feet.

Yarmouth River, or Harbor.

The entrance to this River is in Casco Bay, about 9 miles North-easterly from the city of Portland. From its mouth to Yarmouth Falls Village (which is situated upon its Western Bank), the distance is $1\frac{3}{4}$ miles. In going up, the Channel is extremely narrow, and has but little water in it at Low Tide. In approaching this River, there are two ways, the most direct of which is through Hussey's Sound; the other by the way of Portland.

Hussey's Sound.

The passage into Casco Bay between Peak's Island and Long Island is called Hussey's Sound. By keeping in the middle of this passage, the heaviest-draught vessels may pass through it in safety.

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Sailing Directions for Yarmouth River in Daytime, with favorable winds and fair weather.

By Way of Hussey's Sound.

Coming from the Southwestward, Southward, or Seaward, do not approach Cape Elizabeth nearer than 4 or 5 miles until Portland Head Light bears **NW.** by **N.** $\frac{1}{2}$ **N.**; then run for it on this course until Cape Elizabeth Lights are in range, bearing **SW.** by **W.**; then steer **N.** by **E.** $\frac{1}{2}$ **E.** On this last course, the Red Buoy off Witch Rock, and Tripod upon the Southern part of Ram Island, will both be left on the Port; and Outer Green Island, and the Buoy painted in Red and Black Horizontal stripes off Hussey's Ledge, on the Starboard hand. Continue the course **N.** by **E.** $\frac{1}{2}$ **E.** until Portland Head Light is in range with the Northern point of Ram Island, bearing **SW.** by **W.** Hussey's Sound will then be fairly open, and you may run in about **N.** by **W.**, keeping in the middle of it.

When abreast of the Northern part of Peak's Island, you will see on the Port hand a little round Islet called Pumpkin Knob. When the centre of this Islet bears **SW.**, the course is **N.** by **E.** $\frac{1}{2}$ **E.**, and distance 3 miles to Red Buoy, No. 6, which lies about 100 feet Southeast from Upper Clapboard Ledge. This last-mentioned Ledge has 5 feet water upon it at Low Tide.

Leave this last-mentioned Buoy 150 yards on the Port hand, and steer **NE.** $\frac{1}{2}$ **N.**, leaving Birch Point, which is bold, about 400 yards on the Starboard hand. When this last-mentioned Point bears **S.** by **W.** $\frac{1}{2}$ **W.**, anchor in from 3 to 5 fathoms water, and take a pilot, as beyond this the channel is so crooked and narrow that no correct sailing directions can be given. Birch Point bears **NE.** from the Red Buoy No. 6, off Upper Clapboard Ledge; distance $1\frac{1}{3}$ miles.

From the Eastward, leave the Lighthouse on Halfway Rock about $\frac{1}{2}$ mile to the Northward, and steer **W.** $\frac{1}{4}$ **N.**, leaving the first Island (Outer Green Island) about $\frac{1}{2}$ mile on the Starboard hand. When this last-named Island bears **NE.**, haul in about **NW.**, leaving the Buoy painted in Horizontal stripes off Hussey's Rock on the Starboard hand. After passing this Buoy, Hussey's Sound will be open; then proceed as before directed.

By Way of Portland.

From Portland bound to Yarmouth River, bring the Lighthouse on Portland Breakwater to bear **SW. $\frac{1}{4}$ W.**, and make good the course **NE. $\frac{1}{4}$ E.**, leaving Fort George $\frac{1}{4}$ mile to the Southward, and carrying nothing less than 14 feet water at Low Tide past it. When abreast this Fort, you will see nearly ahead the Red Buoy No. 2, off Hog Island Ledge. Leave this Buoy close to on the Starboard hand, and continue the course, leaving another Red Buoy No. 4, off Brimstone Ledge, also close to on the Starboard hand. When abreast this last-mentioned Buoy, you will see the Spindle and Black Buoy No. 1, off Cow Island Ledge, bearing about **NE. by E.** Leave this last-mentioned Buoy on the Port hand, and make good the course **NE. by N. $\frac{1}{4}$ N.** for the Red Buoy, No. 6, upon Upper Clapboard Ledge, which may be left on the Port hand. When abreast this last-mentioned Buoy, proceed as before directed.

High Water.

It is High Water in Yarmouth River about 20 minutes before it is at Boston. Common Tides rise about $9\frac{1}{4}$ feet.

Freeport River.

The entrance to this River is in Casco Bay, about 11 miles Northeasterly from the city of Portland. There are several ways to approach this place, but the most direct one, especially for strangers, is by the way of Broad Sound.

Sailing Directions for Freeport River, or Strout's Point Village, in Daytime, with favorable winds and fair weather.

By Way of Broad Sound.

From the Southward, Southwestward, or Seaward, keep outside of all the Ledges off Cape Elizabeth, and as soon as the Lighthouse upon Halfway Rock is made, bring it to bear North, and run for it on this course. Leave this Lighthouse about $\frac{1}{4}$ mile to the Westward, and steer **N. by W. $\frac{1}{2}$ W.**, leaving the Black Buoy

off Webster Rock (which lies a short distance to the Northward of this Lighthouse) on the Port hand. When Halfway Rock Light bears **S. $\frac{1}{4}$ E.**, Broad Sound will be fairly open, and you must make good the course **N. $\frac{1}{2}$ W.** As you sail in, you will see on the Starboard hand the Buoy painted in Black and Red Horizontal stripes, off Drunker's Ledge, and also Mark and Eagle Islands. The former Island has a stone Monument upon it 50 feet in height. These are all left to the Eastward. On the Port hand, you will see a small bare Island with ledges around it; this is called the Brown Cow, and is left to the Westward. Continue the course **N. $\frac{1}{2}$ W.** until you make the Red Buoy No. 14, off Whaleboat Ledge. (This last-mentioned Buoy bears **N. $\frac{1}{2}$ W.** from Halfway Rock Light; distance 6 miles.)

Leave this Buoy on the Starboard hand close to, and steer **N.** by **W. $\frac{1}{2}$ W.** $1\frac{1}{4}$ miles, leaving the Red Buoy No. 12, off Green Island Ledge, close to on the Starboard hand. (This last-mentioned Buoy lies Northeast about $\frac{1}{2}$ mile from the Northeast point of Great Chebeag Island.) From this Buoy run **N.NE.** $1\frac{1}{2}$ miles to Black Buoy No. 1, off Mosher Ledge. Leave this Buoy close to on the Port hand, and steer **N.** by **W. $\frac{1}{2}$ W.**, when you will see another Red Buoy, No. 2, (which lies upon Freeport Upper Ledge.) Continue the course until this Buoy bears **NW.**; then run for it, leaving it close to on the Starboard hand. When abreast this Buoy, you will see at the entrance of the River the Black Buoy No. 3, off Bowman's Ledge. Leave this last-mentioned Buoy close to on the Port hand, and run up about **N. $\frac{3}{4}$ E.**, and anchor off the village; not less than 4 fathoms may be carried from sea to this anchorage. If bound farther up, a pilot will be necessary. In running in, the Channel between the two last-mentioned Buoys is very narrow; it is therefore necessary to proceed with caution.

By Way of Portland.

From Portland, bound to Freeport River, bring the Lighthouse on Portland Breakwater to bear **SW. $\frac{1}{4}$ W.**, and make good the course **NE. $\frac{1}{4}$ E.**, leaving Fort George $\frac{1}{4}$ mile to the Southward, and carrying nothing less than 14 feet water at Low Tide past it. When abreast this Fort, you will see nearly ahead the Red Buoy No. 2, off Hog Island Ledge. Leave this Buoy close to on the Starboard hand, and continue the course, leaving another Red Buoy, No. 4, off Brimstone Ledge, also close to on the Starboard

hand. When abreast this last-mentioned Buoy, you will see the Spindle and Black Buoy No. 1, off Cow Island Ledge, bearing about **NE.** by **E.** Leave this last-mentioned Buoy close to on the Port hand, and make good the course **NE.** by **E.** $2\frac{1}{4}$ miles to Spindle and Black Buoy No. 7, off Lower Basket Ledge. Leave this Buoy close to on the Port hand, and run **NE.** $\frac{1}{2}$ **E.** 2 miles to Red Buoy No. 10, off Great Chebeag Bar, leaving it on the Starboard hand. On this last course the Red Buoy No. 8, off Seal Ledge, will be left on the Starboard hand. The passage between the Red Buoy off Great Chebeag Bar and Little John's Island is narrow, but there is not less than 8 fathoms water in it at Low Tide. When abreast this last-mentioned Buoy, steer **E.** by **N.** $1\frac{3}{4}$ miles to Red Buoy No. 12, off Green Island Ledge. On this last course the Black Buoy off the Northeastern part of Great Chebeag will be left on the Starboard hand. Continue the course **E.** by **N.** for the Red Buoy off Green Island Ledge until about 100 yards from it; then, steer **N.NE.** $1\frac{1}{2}$ miles to Black Buoy No. 1, off Mosher Ledge, and follow the directions before given.

High Water.

It is High Water in Freeport River about 20 minutes before it is at Boston. Common Tides rise about $9\frac{1}{4}$ feet.

Harpswell Harbor, or Stover's Cove.

This Harbor is situated in Harpswell Sound, about $6\frac{3}{4}$ miles Northeasterly from the Lighthouse upon Halfway Rock. The only obstructions in entering it from the Sound is the shoal water extending from Stover's Point and Stover's Ledge. Both these dangers are marked with Black Buoys, which in entering are left on the Port hand.

Sailing Directions for Harpswell Harbor, or Stover's Cove, in Daytime, with favorable winds and fair weather.

From the Southwestward, Southward, or Seaward, keep outside of all the Ledges off Cape Elizabeth, and as soon as the Lighthouse upon Halfway Rock is made, bring it to bear North, and run for it

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on this course, leaving it about $\frac{1}{4}$ mile to the Westward. After passing the Black Buoy off Webster Rock (which lies off a short distance to the Northward of this Light), bring the Lighthouse to bear **S.** by **W.** $\frac{1}{2}$ **W.**; on which bearing keep it, and run **N.** by **E.** $\frac{1}{2}$ **E.** As you sail in, you will see on the Starboard hand the Buoy painted in Black and Red Horizontal stripes off Drunker's Ledge. This last-mentioned Buoy bears **N.NE.** from Halfway Rock Lighthouse, distance 2 miles, is bare at Half Tide, and in passing in is left to the Eastward. You will also see nearly ahead the Monument on Little Mark Island; bring this Monument to bear **N.** by **E.** $\frac{1}{2}$ **E.**, and steer for it on this course. When about $\frac{3}{4}$ mile from it, you will see on the Starboard hand the Black Buoy No. 1, off Mark Island Ledge. When this Buoy bears **E.** by **N.**, distance $\frac{1}{2}$ mile, and the Monument **N.** by **E.** $\frac{1}{2}$ **E.**, distance about $\frac{1}{2}$ mile, steer about **NE.** $\frac{1}{4}$ **N.** 4 miles to Black Buoy off Stover's Point. On this last course, you will pass about midway between Great Mark Island and the Red Buoy off Turnip Ledge. After passing this last-mentioned Island and Buoy, keep in the middle of the Sound until you make the Black Buoy No. 1, which lies off Stover's Point on the Western side of the Sound; haul round this last-mentioned Buoy, leaving it close to on the Port, and run in, leaving another Black Buoy which lies off Stover's Ledge also on the Port hand. When this last-mentioned Buoy bears **SE.**, distance about 400 yards, anchor in from 3 to $4\frac{1}{2}$ fathoms water.

From the Eastward, bound to Harpswell Harbor, as soon as Halfway Rock Lighthouse is made, in order to clear all the Ledges, bring it to bear **W.** by **N.**, and run for it on this course. When about $\frac{1}{2}$ mile from it, proceed according to directions before given.

Strangers from the Eastward, with favorable winds, bound to Harpswell Sound, by observing the following directions, may safely pass inshore between the Ledges.

Leave Cape Small Point (which bears **W.** $\frac{1}{2}$ **N.**, distance $3\frac{1}{2}$ miles from Seguin Island Lighthouse) about 1 mile to the Northward; and when it bears **N.NE.**, steer **W.NW.** $8\frac{1}{2}$ miles to Monument on Little Mark Island. As soon as this Monument is made, bring it to bear **W.NW.**, and run for it on this course. When about $\frac{1}{4}$ mile from it, if bound to Harpswell Harbor, run up according to directions before given.

Pott's Harbor.

This excellent Harbor of refuge for small vessels is situated at the entrance of Casco Bay, about half-way between the city of Portland and entrance to Kennebec River, and bears **N.** by **E.** $\frac{1}{2}$ **E.** about 5 miles from the Lighthouse upon Halfway Rock. There are two entrances to this harbor: one by way of Broad Sound, the other (which is Buoyed) by way of Harpswell Sound. Vessels at many times overtaken by a Southeasterly storm, when sailing between Cape Elizabeth and Kennebec River, will find this a very convenient place.

Sailing Directions for Pott's Harbor in Daytime, with favorable winds and fair weather.

From the Southwestward, Southward, or Seaward, keep outside of all the Ledges off Cape Elizabeth, and as soon as the Lighthouse upon Halfway Rock is made, bring it to bear North, and run for it on this course, leaving it about $\frac{1}{4}$ mile to the Westward. After passing the Black Buoy off Webster Rock (which lies off a short distance to the Northward of the Light), bring this Lighthouse to bear **S.** by **W.** $\frac{1}{2}$ **W.**; on which bearing keep it, and steer **N.** by **E.** $\frac{1}{2}$ **E.** As you sail in, you will see on the Starboard hand the Buoy painted in Black and Red Horizontal stripes off Drunker's Ledge. This last-mentioned Buoy bears **N.NE.** from Halfway Rock Light, distance 2 miles, is bare at Half Tide, and in passing in is left to the Eastward. You will also see nearly ahead the Monument on Little Mark Island; bring this Monument to bear **N.** by **E.** $\frac{1}{2}$ **E.**, and steer for it on this course. When about $\frac{3}{4}$ mile from it, you will see on the Starboard hand the Black Buoy No. 1, off Mark Island Ledge. When this Buoy bears **E.** by **N.**, distance $\frac{1}{2}$ mile, and the Monument **N.** by **E.** $\frac{1}{2}$ **E.**, distance $\frac{1}{2}$ mile, steer about **NE.** $\frac{1}{2}$ **N.** On this last course you will pass between Great Mark Island, which bears **NE.** $\frac{1}{2}$ **N.** from the Monument, a little more than $\frac{1}{2}$ mile, and the Red Buoy No. 2, off Turnip Ledge. After passing this last-mentioned Island, you will see the Red Buoy No. 4, off Ram Island. When this last-mentioned Buoy bears North, steer for it, and leave it close to on the Starboard hand. From this last Buoy run **N.NW.** about 200 yards; then haul up about **W.** by **N.**, leaving the Red Buoy No. 2, off Pott's Point, close to on the Starboard hand. When past this

Buoy, run in **N.NE.**, leaving two black Buoys on the Port hand, and anchor in from 4 to 6 fathoms water, with the Upper Buoy bearing about **W.SW.**; distance from 300 to 500 yards.

From the Eastward, leave Cape Small Point, which bears **W. ½ N.**, distance $3\frac{1}{2}$ miles from Seguin Island Light, about 1 mile to the Northward; and when it bears **N.NE.**, steer **W.NW.** $8\frac{1}{2}$ miles to Monument upon Little Mark Island. As soon as the Monument is made, bring it to bear **W.NW.**, and run for it on this course. When about $\frac{1}{4}$ mile from it, proceed as before directed. This course (**W.NW.**) from Cape Small Point passes within the Buoys upon Lumbo's Ledge, Drunker's Ledge, and also Mark Island Ledge.

If the wind is unfavorable to leave this harbor by the passage leading into Harpswell Sound, you may, by the following directions, go out by the Western passage into Broad Sound. Leave the Upper Black Buoy No. 7, off Thrum Cap Ledge, close to on the Port hand, and steer about **W.** by **S. ½ S.**, leaving Horse Island (which is the first to the Westward of this Buoy) not more than 200 yards on the Starboard hand; continue the course until Halfway Rock Lighthouse bears **S. ½ E.** Broad Sound will then be fairly open, and you may run out with this Light bearing **S. ½ E.**

In leaving Pott's Harbor by the Western passage, when abreast of Little Birch Island, which is the first to the Westward of Horse Island, you may steer **W. ½ N.** about one mile, leaving the Black Buoy off the Northeast part of Stove Island close to on the Port hand. When abreast this last-mentioned Buoy, continue the course **W. ½ N.** about 200 or 300 yards. Luckse's Sound will then be fairly open, and you may boldly steer out **SW.** by **W.** for Portland Head Lighthouse, passing about midway between Ram Island and Bang's Island. The Northern part of Ram Island bears **NE.** by **E.** from Portland Head Light; distance $1\frac{1}{4}$ miles.

Mackerel Cove.

The entrance to this small harbor bears **E.NE.** about $1\frac{1}{2}$ miles from the Monument upon Little Mark Island. The Cove is about $\frac{1}{2}$ mile in length, and its general width is about 200 yards. There

are no dangers in entering it from the Sound, and the holding-ground is said to be good, although somewhat exposed to SW. winds.

Sailing Directions for Mackerel Cove in Daytime.

Follow the directions for either Harpswell or Pott's Harbors, and when the Monument upon little Mark Island bears **W.SW.**, make good the course **E.NE.** When at the entrance, keep mid-channel and run in, and anchor near the head of the Cove in from 5 to 7 fathoms water.

High Water.

It is High Water in Harpswell Sound about 30 minutes before it is at Boston. Common Tides rise about $9\frac{1}{4}$ feet.

Quahaug (or Quohog) Bay.

The entrance to this Bay bears about **NE.** from Halfway Rock Lighthouse; distance 8 miles. In entering it, there are numerous dry and sunken Ledges, which lie off its mouth, and at this date (1879) are not buoyed. No proper sailing directions can therefore be given for this place.

New Meadows River.

The entrance to this River bears **NE.** by **E.** from Halfway Rock Lighthouse; distance about $9\frac{1}{2}$ miles.

Sailing Directions for New Meadows River in Daytime, with favorable winds and fair weather.

Vessels from the Southwestward, Southward, or Seaward, may, as soon as the Lighthouse upon Halfway Rock is made, bring it to bear North, and run for it on this course. Leave the Light about $\frac{1}{2}$ mile to the Westward and steer **N.NE.** until it bears **W.SW.**, on which bearing keep it, and steer **E.NE.** for the small Island called the White Bull. This last Island bears **E.NE.** from the Lighthouse upon Halfway Rock, distance 6 miles, and is the first met with on this course. It may also be known by the Islands called the Brown Cow and Mark Island. The former bears from

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the White Bull **SE.** $\frac{1}{2}$ **E.**, distance $1\frac{1}{3}$ miles; the latter, **E.** $\frac{3}{4}$ **S.**, distance $1\frac{1}{8}$ miles. When up with this Island, the Buoy painted in Red and Black Horizontal Stripes, off Lumbo's Ledge, will be seen bearing **S.S.W.**; distance $2\frac{1}{3}$ miles. As soon as the Island called the White Bull is made, keep it a little on the Port bow, in order to clear the rock called Bold Dick, which bears **W.** by **S.** a little more than $\frac{1}{2}$ mile from the Southwest Point of this last-mentioned Island, and is bare at half tide. Leave the White Bull, which is bold, about 200 yards on the Port hand, and make good the course **NE.** $\frac{1}{2}$ **N.** about $2\frac{1}{2}$ miles. On this course and distance you will pass between Flag's Island on the South, and Long Ledge upon the North; keep nearer the latter. After passing this Island and Ledge, you will see nearly ahead the Red Spindle upon Goudy Ledge, which may be left on either hand. When past these, the river will be fairly open, bearing about **N.NE.**; you can then run up, keeping the Starboard hand best aboard for about 3 miles, in order to avoid Sheep Island Ledge. After passing this Ledge, anchor where you can find less than 10 fathoms water.

From the Eastward, leave Cape Small Point, which bears **W.** $\frac{1}{2}$ **N.**, distance $3\frac{1}{3}$ miles from Seguin Island Light, about 1 mile to the Northward, and when it bears **N.NE.** steer **NW.** $\frac{1}{2}$ **W.** $2\frac{1}{2}$ miles, when you will be abreast the small Island called the Brown Cow. This Island bears **W.NW.**, distance $2\frac{1}{4}$ miles, from Cape Small Point, and is bold. Leave the Island about 200 or 300 yards on the Starboard hand, and steer **NW.** $\frac{1}{2}$ **W.** $1\frac{1}{2}$ miles, to the White Bull. When about 200 yards from it, proceed as before directed.

Cape Small Point Harbor.

This Harbor bears from the Lighthouse upon Halfway Rock about **E.NE.**, distance $9\frac{3}{4}$ miles; from Cape Small Point, North $2\frac{3}{4}$ miles. A Bar, having but little water upon it at Low Tide, extends across its mouth, making it only available for light-draught vessels.

Sailing Directions for Cape Small Point Harbor in Daytime, with favorable winds and fair weather.

Vessels from the Westward, bound to this Harbor, may bring the Lighthouse upon Halfway Rock to bear **W.** by **S.**, distance about $\frac{3}{4}$ mile; on which bearing keep it, and steer **E.** by **N.** for the small Island called the Brown Cow; distance 7 miles from this last-mentioned Lighthouse. On this course, the Buoy painted in Red and Black Horizontal Stripes, off Lumbo's Ledge, will be left a little more than $\frac{1}{2}$ mile upon the Starboard hand. When up with the Brown Cow (which is the first Island met with on this course from Halfway Rock Lighthouse), you may leave it 150 yards on the Port hand, and steer **E.** by **N.** $1\frac{1}{3}$ miles to Red Buoy No. 2, off Gooseberry Ledge. Leave this Buoy close to on the Starboard hand, and run **N.** by **E.** $\frac{1}{4}$ **E.** 1 mile, leaving Great and Little Wood Islands both on the Port hand, and the Buoy painted in Black and Red Horizontal Stripes, off Middle Ledge, about 150 yards on the Starboard hand. After passing this Buoy continue the course **N.** by **E.** $\frac{1}{4}$ **E.**, about $\frac{1}{4}$ mile; then haul up **E.** by **N.**, leaving the Red Buoy No. 4, off Pitch Pine Ledge, about 100 yards on the Starboard hand, and anchor in from $3\frac{1}{2}$ to 5 fathoms water, the last-mentioned Buoy bearing **SW.** by **W.**, distance 300 yards. Above this, a pilot is necessary.

From the Eastward, haul round Cape Small Point at a distance of about 1 mile, leaving Bald Head Ledge—which bears **W.** $\frac{1}{4}$ **N.** from Cape Small Point, distance $\frac{3}{4}$ mile, and is bare at half tide—about $\frac{1}{4}$ mile to the Eastward. When Cape Small Point bears **E.** by **S.**, steer **N.** by **E.** for the Red Buoy off Gooseberry Ledge, and proceed as before directed.

High Water.

It is High Water at Cape Small Point Harbor about 20 minutes before it is at Boston. Common Tides rise about $9\frac{1}{4}$ feet.

Kennebeck River.

The entrance to this River is about East, 22 miles from the city of Portland; 74 miles Northeasterly from Cape Ann; and 19 miles **W.** by **N.** from Monhegan Island Lighthouse.

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Seguin Island Lighthouse.

Upon the highest part of Seguin Island is built a Lighthouse, which shows a fixed White Light. A Steam Whistle, giving blasts of 8 seconds' duration at intervals of 52 seconds, is placed near this Lighthouse.

Bearings and Distances from Seguin Island Lighthouse.

		Distance.	
Cape Cod Highland Lighthouse,	S. by W. $\frac{3}{4}$ W.,	101	miles.
Thatcher's Island Lighthouses,	SW. $\frac{1}{4}$ S., . .	74	"
Boon Island Lighthouse, . .	SW. $\frac{7}{8}$ W., . .	46 $\frac{1}{2}$	"
Cape Elizabeth Lighthouses, .	W. by S., . .	21	"
Whistling Buoy off Cape Elizabeth,	W. by S. $\frac{1}{2}$ S.,	21 $\frac{1}{8}$	"
Monhegan Island Lighthouse, .	E. $\frac{1}{4}$ S., . . .	19	"
Matinicus Island Lighthouses, .	E. $\frac{3}{4}$ S., . . .	39	"
Seal Island Lighthouse, . . .	E.SE., . . .	163	"
Pond Island Lighthouse, entrance to Kennebec River, .	N.,	2	"
Light upon Halfway Rock, . .	W.,	12 $\frac{1}{2}$	"

Pond Island Lighthouse.

Upon Pond Island, Western side of entrance to Kennebec River, is built a Lighthouse, which shows a fixed White Light. A Fog Bell is placed near this Lighthouse. Seguin Island Lighthouse bears from Pond Island Lighthouse South; distance 2 miles.

Dangers to be avoided in entering the Kennebec River to the Westward of Seguin Lighthouse.***Fuller's Rock.***

This small, rocky Island bears West from Seguin Island Lighthouse, distance $3\frac{1}{4}$ miles; and South, about $\frac{1}{4}$ mile, from Cape Small Point. At Low Tide, vessels of more than 9 feet draught should not attempt to pass within this Island.

Mill Ledge.

This Ledge, upon which 11 feet water has been found, is marked upon its Southern part with a Buoy, having Red and Black Horizontal Stripes. Seguin Lighthouse bears from this Buoy N. $\frac{1}{4}$ E.; distance 1 mile. There is a good channel between this Ledge and Seguin Island.

Jack-knife Ledge.

This dangerous Ledge, which has but 5 feet water upon it at very Low Tides, is marked upon its Southern part with a Black Buoy. Seguin Lighthouse bears from this Buoy **SE.** by **S.**, $1\frac{1}{4}$ miles. This Buoy has the letters J. K. upon it.

Dangers to be avoided in entering the Kennebec River to the Eastward of Seguin Lighthouse.

Bantum Ledge.

This dangerous Ledge, which is bare at Low Tide, is marked upon its Southwestern part with a Red Buoy, No. 10. Seguin Light bears from this Buoy West; distance 6 miles. 25 fathoms water was found $\frac{1}{4}$ mile **E.** by **S.** from this Ledge; 24 fathoms West 400 yards from it; and 11 fathoms South 300 yards from it. In approaching this Ledge in thick weather or night-time, the lead, therefore, gives but little warning. There is a good channel between it and Damiscove Islands.

Tom's Rock.

This dangerous Rock, upon which there is but little water at Low Tide, is marked upon its Southwestern part with a Red Buoy, No. 2. Seguin Light bears from this Buoy **SW.** by **W.** $\frac{3}{4}$ **W.**; distance $2\frac{1}{2}$ miles. Vessels passing to the Eastward of Seguin Island, bound into the Kennebec River, must leave this Buoy upon the Starboard hand.

White Ledge.

This Ledge, upon which there is 7 feet water at Low Tide, is marked upon its Eastern side with a Black Buoy, No. 1. Seguin Light bears from this Buoy **SW.** by **S.** $\frac{1}{2}$ **S.**; distance $1\frac{1}{2}$ miles. Vessels passing to the Eastward of Seguin Island, bound into the Kennebec River, must leave this Buoy upon the Port hand. Between this Buoy and the Northern point of Seguin there are several Ledges. Strangers should not, therefore, attempt to pass through between them.

Remarks.

The depth of water in the Kennebec River from Pond Island Light to the city of Bath is sufficient to admit even the heaviest-draught vessels; but the navigation is somewhat dangerous, on account of

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the current, which in many parts runs very strong. Strangers should not, therefore, attempt to enter this River without a pilot, unless they have a fair and commanding wind.

Sailing Directions for the Kennebec River in Day-time, with favorable winds and fair weather.

From the Westward, pass without the Ledges off Cape Elizabeth, and as soon as Seguin Lighthouse is made, bring it to bear **E. NE.**, and run for it on this course until Pond Island Lighthouse bears **N. by E. $\frac{1}{4}$ E.**; then run for it on this bearing. On this last course, Seguin Lighthouse will be left a little more than $\frac{1}{2}$ mile to the Eastward, and the Black Buoy off Jack-knife Ledge will be left on the Port hand. As you approach Pond Island Lighthouse you will see a little on the Starboard bow the Black Buoy No. 3. This Buoy lies off Pond Island Bar, and bears from the Lighthouse South, $\frac{5}{8}$ mile. Leave this last-mentioned Buoy close to on the Port hand and run in, leaving the Lighthouse about 300 yards to the Westward. When abreast of it, or when it bears West, the course is about **NW. by N.** to Hunniss Point, or Fort Popham. As you sail in, you will see, nearly in mid-channel, two small, bare Rocky Islets, which are called the Sugar Loaves. You can go on either side of these, but the most direct course is to the Westward of them. The current of Flood sets strong upon these Islets, and it is advisable, when past Pond Island Light, — especially with light winds, — to haul over for the Western shore, in order to pass them in mid-channel. When abreast Fort Popham, the course is **N. $\frac{1}{2}$ E.**, $1\frac{1}{2}$ miles to the Buoy painted in Red and Black Horizontal Stripes, off Perkins' Ledge. On this last course, Shag Rock, which is small, will be left on the Starboard, and Cox Head, which is bold, on the Port hand. Leave this last-mentioned Buoy on the Starboard hand, and then steer **N. by E. $1\frac{1}{4}$** miles to Bald Head. On this last course, you will pass about midway between the Black Buoy No. 1, off Parker's Ledge, and Perkins' Island. There is good anchorage between the last Island and Bald Head in from 4 to 7 fathoms water. As you approach this last-mentioned Head you will see to the Northeastward another opening, which is the entrance to Back River. When Bald Head Point is distant about 300 yards, steer **NW. by N.** about 1 mile, leaving the Spindle upon Seal Rocks on the Port hand. You will then be abreast of

Phippsburg Centre, which is on the Western side of the river. From this point the course is about **N.NE.**, leaving some small, Rocky Islets and also the Black Buoy off Lee's Rock all on the Port, and Pettis's Rocks—which are above water—and the Spindle on the Northern part of Ram Island, on the Starboard hand. When past this last Spindle, which you must go close to, haul a little over toward the Eastern shore and keep in the middle of the river until you make the Black Buoy off Lithgow Ledge, which may be left 50 yards on either hand. From the Spindle upon the Northern point of Ram Island to this last Buoy the course is about **N.** by **E.** $\frac{1}{2}$ **E.**; distance $2\frac{1}{4}$ miles. About $\frac{1}{3}$ mile above this Buoy the river suddenly turns to the Westward, having a width of about 300 yards, with a very strong and dangerous current. This sudden turn is called Fiddler's Reach. There are no obstructions in this Reach, but on account of the rapid current and baffling winds it may be considered one of the most dangerous places in the river. With a head tide, unless the wind is strong and nearly aft, vessels must not attempt to pass through it, but when nearly up with the last-mentioned Buoy, must haul in, and anchor in from 4 to 6 fathoms water in Morris Cove. The best anchorage is about **SW.** by **W.** from the Black Buoy off Lithgow Ledge; distance about $\frac{1}{4}$ mile. In order to avoid the Ledges, after passing Fiddler's Reach, keep the Eastern shore best aboard to the city of Bath. The distance from Pond Island Light to Bath is about 11 miles. Strangers bound farther up the river should take a pilot at Bath.

From the Eastward, in order to clear Bantum Ledge, as soon as Seguin Light is made, bring it to bear **W.** $\frac{3}{4}$ **N.**, and run for it on this course until Pond Island Lighthouse bears **NW.** by **W.**; then run for this last-mentioned Lighthouse on this course, leaving the Red Buoy No. 2, off Tom's Rock, on the Starboard, and Seguin Dry Ledges and the Black Buoy off White Ledge, upon the Port hand. Continue the course **NW.** by **W.** for this Light until about 300 yards from it; then follow the directions before given.

Anchorage, for Daytime.

If the wind and tide are both ahead, and you wish to find anchorage, follow the directions for entering the Kennebec River until abreast Pond Island; then bring the Light to bear **SW.** by **W.** $\frac{1}{2}$ **W.**, on which bearing keep it and run **NE.** by **E.** $\frac{1}{2}$ **E.** until the

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water shoals to 5 fathoms at High Tide, and $3\frac{1}{2}$ at Low Tide; then anchor between Stage and Salter's Islands.

If you wish to make a harbor when off Seguin, follow the directions before given for Kennebec River, and anchor upon Parker's Flats in from $3\frac{1}{2}$ to 6 fathoms water, where you may lie secure from all winds.

This anchorage is above Parker's Head, which is the second High Bluff on the Western side of the river above Hunniwell's Point, or Fort Popham. This anchorage is also about $3\frac{1}{2}$ miles from Pond Island Lighthouses.

Strangers should not attempt to enter the Kennebec River at night.

High Water.

It is High Water at Hunniwell's Point, near the entrance to the Kennebec River, about 12 minutes before it is at Boston. Common Tides rise about 8 feet.

Sheepscot River.

The entrance to this River is about 5 miles Northeast from Seguin Lighthouse.

Hendrick's Head Lighthouse.

Upon Hendrick's Head, the Eastern side of the mouth of this River is erected a Lighthouse, which shows a revolving White Light.

Remarks.

The depth of water in this River is sufficient to admit the heaviest-draught vessels, 7 fathoms being the shoalest in the channel from the mouth to the town of Wiscasset, a distance of nearly 14 miles. There are quite a number of obstructions near the entrance, and also within the river, but they are all marked with Buoys and Spindles in the channel-way. The current in some parts of it runs very strong, and strangers should not attempt to enter it unless they have a fair and commanding wind.

Sailing Directions for Sheepscot River in Daytime, with favorable Winds and fair weather.

Coming from the Westward, leave Seguin Island about $\frac{1}{2}$ mile on the Port hand, and when the Lighthouse bears North, steer **NE.** by **E.** $\frac{1}{2}$ **E.** On this course you will see the Red Buoy No. 2, off Tom's Rock; this Buoy bears **NE.** by **E.** $\frac{3}{4}$ **E.** from Seguin Light; distance $2\frac{1}{3}$ miles. Leave this Buoy close to on the Port hand, and steer for Hendrick's Head Light, bearing about **N.NE.** As you sail in on this course, you will see on the Port hand several Dry Ledges, and also the Buoy painted in Red and Black Horizontal stripes off Griffith's Ledge. On the Starboard hand will be seen a small Islet, with several dry rocks, about one mile to the Northward of it; this Island is called Lower Mark Island. Leave Hendrick's Head Light about 300 yards to the Eastward, and make good the course **N.** by **E.** $\frac{1}{2}$ **E.** On this course the following Buoys, Islands, and Spindle will be left on the Port: First, a Buoy painted in Red and Black Horizontal stripes; second, Middle Mark Island; third, a Spindle; fourth, another Buoy painted in Red and Black Horizontal stripes; fifth, Upper Mark Island; and sixth, the Black Buoy No. 3, off Hogdon's Ledge. This last Buoy is $3\frac{1}{2}$ miles from the Lighthouse on Hendrick's Head. On this course, two Red Buoys will be left on the Starboard hand: the first is $2\frac{1}{4}$ miles above the Lighthouse, and nearly opposite the Spindle; the second is a little more than $3\frac{1}{2}$ miles from the Lighthouse, and nearly opposite Hogdon's Ledge. After passing the two last Buoys, keep the middle of the River for $2\frac{1}{4}$ miles, until abreast the Black Buoy off Greenleaf's Ledge. Leave this Ledge upon the Port hand, and if the current is running up, keep the Western shore best aboard, to avoid being carried ashore or into Cross River. After passing this place, keep the middle of the River again, course about **N.NE.**, $2\frac{1}{4}$ miles to the Spindle on Merrill's Ledge, which is left on the Starboard hand. A little before you come up with this last-mentioned Ledge, keep the Western shore aboard until well past it; then keep the middle until up with the Narrows; here the river turns suddenly to the Westward. In passing through the Narrows, with an Ebb Tide, keep the Northern side best aboard, to avoid Seal Rock, which is marked with a Black Buoy; but if the tide is running up, keep in the middle of the passage, leaving the Buoy on the Port hand. From this Buoy make good the course about **N.** by **W.** for the town of Wiscasset.

From the Eastward, bring Seguin Lighthouse to bear **W. $\frac{1}{2}$ N.**, and run for it until abreast the Buoy off Bantum Ledge (before described in dangers entering the Kennebec River). Leave this Buoy about $\frac{1}{4}$ mile to the Northward, and make good the course **NW.** by **N. $\frac{1}{2}$ N.** until Hendrick's Head Lighthouse bears **N.** by **E. $\frac{3}{4}$ E.**; then follow the directions before given.

Strangers should not attempt to run up the Sheepscot River at night.

High Water.

It is High Water in the Sheepscot River about 16 minutes before it is at Boston. Common tides rise from 8 to 9 feet.

In running up the Sheepscot River, be careful to avoid a Ledge having about 10 feet water upon it. This danger bears about South from Hendrick's Head Light, distance $\frac{1}{4}$ mile, and at this date (1879) is not Buoyed.

Ebenicook Harbor.

This safe and convenient Harbor is on the Northwest end of Southport Island, East side of the Sheepscot River, about $8\frac{1}{2}$ miles **NE.** by **N.** from Seguin Light, and $1\frac{1}{4}$ miles above Hendrick's Head Lighthouse; it is easy of access, and is said to be free from ice in the winter. There are no obstructions at its entrance, and any stranger can safely enter it in the daytime by the following directions.

Sailing Directions for Ebenicook Harbor in Day-time, with favorable winds and fair weather.

Coming from the Westward, leave Seguin Island about $\frac{1}{2}$ mile on the Port hand, and when the Lighthouse bears North, steer **NE.** by **E. $\frac{1}{2}$ E.** On this course you will see the Red Buoy No. 2, off Tom's Rock; this Buoy bears **NE.** by **E. $\frac{3}{4}$ E.** from Seguin Light, distance $2\frac{1}{2}$ miles. Leave this Buoy close to on the Port hand, and steer for Hendrick's Head Light, bearing about **N.NE.** As you sail in on this course, you will see on the Port hand several Dry Ledges, and also the Buoy painted in Red and Black Horizontal stripes off Griffith's Ledge. On the Starboard hand will be seen a small Islet, with several dry Rocks to the northward of it;

this Islet is called Lower Mark Island. Leave this last-mentioned Lighthouse 300 or 400 yards to the Eastward, and steer in about **N. by E. $\frac{1}{4}$ E.**; the first opening above Hendrick's Head Light upon the Eastern side is the entrance to this harbor. Continue the course until this entrance is fairly open; then run in midway (course about **E. by S.**) until past the Southern point of Green Island, which is left on the Port hand; then steer more Northerly, and anchor where you please.

From the Eastward, bring Seguin Lighthouse to bear **W. $\frac{1}{2}$ N.**, and run for it until abreast the Buoy off Bantum Ledge (before described in dangers entering the Kennebec River). Leave this Buoy about $\frac{1}{4}$ mile to the Northward, and make good the course **NW. by N. $\frac{1}{2}$ N.** until Hendrick's Head Lighthouse bears **N. by E. $\frac{3}{4}$ E.**; then follow the directions before given.

If your vessel draws more than 14 feet water, be careful to avoid a Ledge which bears **N. by E. $\frac{1}{2}$ E.** from Hendrick's Head Lighthouse; distance $\frac{3}{8}$ mile.

Booth Bay, or Townsend Harbor.

This excellent harbor of refuge is about 10 miles Northeast from Seguin Lighthouse, and Northwest about 15 miles from Monhegan Island Lighthouse.

Burnt Island Lighthouse.

Upon Burnt Island, West side of entrance to this harbor, is erected a Lighthouse which shows a fixed White Light.

Remarks.

In entering this harbor there are but few obstructions, and the depth of water is sufficient to admit the heaviest-draught vessels. The shores are generally bold, and there is but little current in the passages.

Sailing Directions for Booth Bay, or Townsend Harbor in Daytime, with favorable winds and fair weather.

From the Westward, leave Seguin about $\frac{1}{2}$ mile on the Port hand, passing about midway between the Buoy upon Mile Ledge

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and the Southern point of the Island. When the Lighthouse bears North, steer **NE.** by **E.** $\frac{1}{2}$ **E.** On this course you will leave the Red Buoy off Tom's Rock on the Port hand; and you will also see the Beacon upon one of the bare rocks called the Cuckolds.

This Beacon is 57 feet high, and the upper half is covered with boards, which are painted Black. Leave this Beacon about 400 yards on the Port hand, and steer for Burnt Island Lighthouse, bearing **N.** by **E.** $\frac{3}{4}$ **E.**; distance $2\frac{3}{4}$ miles. As you sail in, you will see on the Starboard hand a Red Buoy, No. 12, which lies off Squirrel Island Ledge. Leave this Buoy close to on the Starboard hand, and make good the course **N.** by **E.** $\frac{1}{2}$ **E.**, leaving Burnt Island Lighthouse about 200 yards on the Port hand, and another Island to the Northward of it, called Mouse Island, also on the Port hand; and Tumbler Island, which is small, on the Starboard hand. When past this last-mentioned Island, haul gradually to the Eastward, and anchor in the East Harbor in from 4 to 6 fathoms water. Or when past Tumbler Island (which bears **NE.** by **N.** $\frac{3}{4}$ mile from Burnt Island Lighthouse), haul gradually to the Westward, and anchor in the West Harbor in from $4\frac{1}{2}$ to 6 fathoms water.

Directions for passing to the Southward, or without the Damiscove Islands, and Bantum Ledge.

Bring Monhegan Lighthouse to bear East; on which bearing keep it, and steer West. As soon as Seguin Lighthouse is made, bring it to bear **W.** $\frac{1}{2}$ **N.**, and run for it on this course. If there is no error in the Compass, the Buoy off Bantum Ledge will be left about $\frac{1}{3}$ mile to the Northward; haul round this last-mentioned Buoy at a distance of $\frac{1}{4}$ mile, leaving it to the Eastward, and steer about North for the Beacon upon the Cuckolds. Leave this Beacon about 400 yards to the Westward, and follow the directions before given. In order to avoid a Ledge which lies between the Buoy off the Northwestern part of Squirrel Island and Burnt Island Lighthouse, it is advisable for heavy-draught vessels, at Low Tide, when the Beacon upon the Cuckolds bears **SW.** by **W.**, to run **NE.** by **E.** until abreast the Southeast point of Squirrel Island; then gradually haul to the Northward, leaving the said Island about 400 yards to the Westward. When past Squirrel Island, run for Burnt Island Lighthouse, bearing about **NW.** by **N.**, leaving it about 200 or 300 yards on the Port hand, and proceed as before directed.

Currents.

The current of Flood sets strong to the Northward across Bantum Ledge, and also the Ledges South of Damiscove Islands, it is therefore necessary for vessels in thick weather, passing without them, to proceed with caution.

Bantum Ledge.

This dangerous Rock or Ledge (before described in dangers for entering the Kennebec River) is bare at Low Tide. Seguin Light bears West from it, distance 6 miles; Southern point of Damiscove Island (the nearest land to it), NE. by N. $\frac{1}{4}$ N., distance $1\frac{1}{2}$ miles. It is marked upon its Southwest part with a Red Buoy, No. 10.

Directions for passing to the Northward or within the Damiscove Islands.*White Islands.*

In approaching Booth Bay or Townsend Harbor from the Eastward, there will be seen to the Westward two White Islands; the Southeast point of the Southern Island is a remarkable high white Bluff, making one of the best landmarks upon the coast; it cannot, therefore, be mistaken for any other point in this vicinity. The Northern White Island bears from Monhegan Lighthouse W. NW., distance $11\frac{1}{4}$ miles; from Pemaquid Point Lighthouse, SW. by W. $\frac{1}{2}$ W., distance 4 miles. The Northern and Eastern part of these Islands are bold, and in thick weather the lead gives but little warning in approaching them.

Outer Herring Island Ledge.

This Ledge, upon which there is but little water at Low Tide, is marked upon its Eastern part with a Buoy painted in Red and Black Horizontal Stripes. The Northern White Island bears from this Buoy N. $\frac{1}{2}$ W., $1\frac{1}{2}$ miles.

Pemaquid Ledge.

This Ledge, upon which there are 9 feet water at Low Tide, is marked upon its Southern part with a Buoy painted in Red and Black Horizontal Stripes. The Northern White Island bears from this Buoy W. by S. $\frac{1}{2}$ S., distance $2\frac{3}{4}$ miles; Pemaquid Point Lighthouse, NE. $\frac{1}{2}$ N., distance $1\frac{1}{4}$ miles.

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Sailing Directions.

From the Eastward, you may run for the Northern White Island on any course from **W.** by **S.** to **N.NW.** Leave this last-mentioned Island (the Northern part of which is bold) about 300 yards to the Southward, and steer **NW.** by **N.** As you sail in, you will see on the Port hand several Islands; the two first are small, and are called the Hypocrites. Leave the Northernmost of these two last-mentioned Islands at least 400 yards to the Southward, and when it bears South haul up **W.** by **N.** $\frac{1}{2}$ **N.**, leaving Fisherman's Island (the Northern part of which is bold) on the Port, and the Red Buoy No. 2, on Gangway Ledge on the Starboard hand. When Burnt Island Lighthouse bears **NW.** $\frac{1}{2}$ **N.**, run for it, leaving the Red Buoys off Card's Ledge, and also Spruce Point and Tumbler Island Ledges, all on the Starboard hand. Continue the course for the Lighthouse until about 200 yards from it; then follow the directions before given.

Beating into Townsend Harbor by the Eastern Passage.

After passing the White Islands, which are left to the Southward, strangers may, in daytime, beat safely into this harbor by keeping 350 yards to the Northward of the Islands, and to the Southwestward of the four Red Buoys off the Ledges.

Sailing Directions for Booth Bay, or Townsend Harbor, at Night-time, with favorable winds and fair weather.

Coming from the Westward, leave Seguin Island from 2 to 3 miles to the Northward, in order to avoid Mile Ledge, which bears **S.** $\frac{1}{4}$ **W.** from the Light; distance 1 mile. When Seguin Light bears **N.** by **W.**, steer **NE.** by **E.** 3 or 4 miles, when Burnt Island Lighthouse, which shows a fixed White Light, will be open. Continue the course until this Light bears **N.** by **E.** $\frac{1}{2}$ **E.**; then run for it on this bearing until about $\frac{1}{4}$ mile from it, or past Squirrel Island Ledge; then steer more Easterly, leaving it close to on the Port hand. When abreast of this Light, steer in **N.** by **E.** about $\frac{3}{4}$ mile; then anchor in from 7 to 10 fathoms water.

From the Eastward or Seaward, bound into Townsend Harbor by the Western passage, as soon as Seguin Light is made, in order to

clear Bantum Ledge, and all other dangers, do not bring it to bear to the Westward of **W.** by **N.** until Burnt Island Light bears **N.** by **E.** $\frac{1}{2}$ **E.** You can then run in for Burnt Island Light without danger, and follow the directions before given.

Beating in at Night.

In beating into this harbor at night by the Western Way, you may bring Burnt Island Light to bear from **N.** by **E.** to **N.** by **E.** $\frac{1}{2}$ **E.**, until past the Beacon on the Cuckolds (before described). After passing this Beacon the shores are bold, and may be approached within 200 or 300 yards until you are up with the Northwestern part of Squirrel Island. Here a Ledge, having but 7 feet water upon it at Low Tide, lies off 450 yards from the Island. In order to avoid this Ledge, it may be advisable at night, when the Buoy upon it cannot be seen, for heavy-draught vessels to go to the Eastward of Squirrel Island. In beating in to the Eastward of this Island, keep nearest to it, in order to avoid the Ledges off the opposite shore; and after passing it, keep nearest the Lighthouse and Mouse Island until past the latter; then anchor. Mouse Island is the first North of the Lighthouse, and in entering this harbor is left on the Port hand.

At Night or Day, with strong winds blowing out of the harbor, if you have long Cables, you may anchor on either side of Squirrel Island, with good holding-ground, in from 10 to 20 fathoms water.

Directions for the Eastern Way, at Night-time.

From the Eastward, bring Monhegan Light to bear **SE.** by **E.** $\frac{1}{2}$ **E.**, on which bearing keep it, and steer **NW.** by **W.** $\frac{1}{2}$ **W.** Soon as Burnt Island Light opens, bring it to bear **NW.**, and run for it on this course. If there is no error in the compass, the Northern White Island, which is bold, will be left about 300 yards to the Southward. In running this course, keep a sharp lookout for these Islands, especially if the night is very dark. When up with them, Pemaquid Point Light will bear about **NE.** by **E.** $\frac{1}{2}$ **E.** Leave the Northern Island about 300 yards on the Port hand, and when its Northern Point bears South, run **NW.** by **N.** about $\frac{3}{4}$ mile, in order to clear the two small Islands called the Hypocrites, which are the first to the Westward of the White Islands. When abreast them; haul up **W.** by **N.**, leaving Fisherman's Island (the northern

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point of which is bold) upon the Port hand. Continue the course **W. by N.** until Burnt Island Light bears **NW.** by **N.**; then run for it until about 300 yards from it; then follow the directions before given.

Fisherman's Island is the first large Island to the Eastward of Squirrel Island. At night, from Seaward, or any other point, bound into Townsend Harbor by the Eastern passage, as soon as Burnt Island Light is made, or opens, bring it to bear **NW.**, and follow the directions before given.

Beating in at Night by the Eastern Passage.

Beating in by this passage, when Pemaquid Point Light bears North, keep Burnt Island Light open, bearing about **NW.**, until up with the White Islands, which are left to the Southward. In order to avoid the Ledges, after passing the Hypocrites and Fisherman's Island, do not bring Burnt Island Light to bear to the Westward of **NW. ½ N.**

High Water.

It is High Water at Booth Bay 27 minutes before it is at Boston. Common Tides rise about $9\frac{1}{2}$ feet.

Linekin's Bay.

This Bay, which is only separated from Booth Bay by a Peninsula called Spruce Point, is about $2\frac{1}{2}$ miles in length, and about 1 mile in breadth. The entrance or channel (which has a width of from 500 to 600 yards) is between Spruce Point Ledge and Negro Island, the former of which is marked upon its Southeastern part with a Red Buoy No. 6, which in entering is left on the Port hand. Burnt Island Lighthouse bears from this Buoy **W.NW.**; distance 1 mile. There are several Ledges within this Bay, which at this time are not Buoyed; but 5 fathoms water can be carried at Low Tide up to the head of it.

Sailing Directions for Linekin's Bay, with favorable winds and fair weather.

Leave the Beacon upon the Cuckolds (before described in directions for Booth Bay Harbor) about 400 yards on the Port hand, and steer for Burnt Island Lighthouse, bearing **N.** by **E.** $\frac{3}{4}$ **E.**; distance $2\frac{3}{4}$ miles. As you sail in, you will see on the Starboard hand a Red Buoy No. 12, which lies off Squirrel Island Ledge. Leave this Buoy close to on the Starboard hand, and steer **E.** $\frac{3}{4}$ **N.** one mile to Red Buoy No. 8, which lies off the Southeast part of Spruce Point Ledge. Leave this Buoy close to on the Port hand, and run about **NE.** As you enter the Bay you will see, a little on the Port bow, Cabbage Island. From the Southern part of this Island shoal water extends off to the Southward 300 yards; but its Eastern and Western sides are bold. In order to avoid Holbrook's Ledge, which lies 600 yards to the Eastward of this Island, and is bare at Low Tide, you should not leave the Island more than 250 yards to the Westward. When abreast it, make good the course **NE.** by **N.**, leaving Seal Rocks (which lie **NE.** $\frac{1}{4}$ mile from the Northern end of Cabbage Island, and have but 4 feet water upon them at Low Tide) on the Port hand, and anchor at the Head of the Bay in from 5 to 7 fathoms water. Or you may leave Cabbage Island to the Eastward and run in about midway between it and the Western shore. When abreast the Island, haul in about **N.** by **W.** $\frac{1}{2}$ **W.**, and anchor on the Eastern side of Lewis Cove in from 4 to 6 fathoms water.

From the Eastward, leave the Northern White Island (before described in directions for Booth Bay Harbor) about 300 yards on the Port hand, and steer **NW.** by **N.** As you sail in, you will see on the Port hand several Islands; the first two are small, and are called the Hypocrites. Leave the Northernmost 400 yards to the Southward, and when it bears South, haul up **W.** by **N.** $\frac{1}{2}$ **N.**, leaving Fisherman's Island (the Northern part of which is bold) on the Port, and the Red Buoy No. 2, off Gangway Ledge, on the Starboard hand. When Burnt Island Lighthouse bears **NW.** $\frac{1}{2}$ **N.**, run for it on this course, leaving the Red Buoy No. 4, on Card's Ledge, upon the Starboard hand. When the Red Buoy off the Southeast part of Spruce Point Ledge bears **N.** by **E.**, run for it (Burnt Island Light bears from this last-mentioned Buoy **W.** **NW.**, distance 1 mile), leaving it close to on the Port hand; and Negro Island, which is bold, on the Starboard hand. If bound up

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the Bay, follow the directions before given. Or when abreast of the Buoy off Spruce Point Ledge, you may run **E.** by **N.** $\frac{1}{2}$ **N.** about $\frac{3}{4}$ mile; then haul gradually to the Southward, and anchor near the shore, which is bold, in from 9 to 12 fathoms water.

Upon the Eastern side of Linekin's Bay there are extensive Porgy Factories.

High Water.

It is High Water in Linegan's Bay about the same time as at Booth Bay.

Damariscotta River.

The entrance to this River is about 3 miles to the Eastward of Booth Bay, and about the same distance to the Westward of the Lighthouse upon Pemaquid Point. From its mouth to the towns of Damariscotta and Newcastle, the former place of which is situated on its Eastern Bank, the latter upon its Western, the distance is about 14 miles. From Hogdon's Mills (which is situated on its Western side, about 3 miles above the entrance) to Damariscotta there are a number of dangers which, at this time, are not Buoyed; it is therefore advisable for strangers bound up to the last-mentioned place to take pilots.

Sailing Directions for Damariscotta River in Day-time, with favorable winds and fair weather.

Directions to pass within the Damiscove Islands.

From the Westward, leave the Beacon upon the Cuckolds (before described in directions for Booth Bay Harbor) about $\frac{1}{4}$ mile to the Westward, and steer about **NE.** by **N.** until this Beacon bears **W.SW.**; on which bearing keep it, and steer **E.NE.** for the Red Buoy No. 2, off the Southwest part of Gangway Ledge. Leave this Buoy about 200 yards on the Port hand, and steer **E.** by **S.** until the Northern White Island bears **S.** by **W.** $\frac{3}{4}$ **W.**; then run **N.** by **E.** $\frac{3}{4}$ **E.**, keeping a sharp lookout for the Red Buoy No. 2, off the Western part of Inner Heron Island Ledge.

Leave this Buoy close to on the Starboard hand, and run up about N. by E. $\frac{1}{2}$ E., keeping in the middle of the river until abreast Varnum's Point; this point is upon the Western side of the river (about $2\frac{1}{3}$ miles from the last-mentioned Buoy). When abreast Varnum's Point, you will see Hogdon's Mills on the Western side of the River; anchor abreast of them, near the middle, in about 5 fathoms water, where you may lie safe from all winds. If bound up to Damariscotta, it is advisable to take a pilot here.

Directions to pass without the Damiscove Islands.

From the Westward, leave Seguin Island 2 or 3 miles to the Northward, and when the Lighthouse bears North, steer E. by N., leaving the Buoy off Bantum Ledge well to the Northward. Continue the course until Pemaquid Point bears NE. by N.; then run for it on this course, leaving Pumpkin and Outer Heron Island Ledges well to the Westward. When the Northern White Island (before described) bears NW. $\frac{1}{2}$ N., run for it on this course. Leave this Island about 300 yards on the Port hand, and when it bears S. by W. $\frac{3}{4}$ W., steer N. by E. $\frac{3}{4}$ E., keeping a sharp lookout for the Red Buoy No. 2, off the Western part of Inner Heron Island Ledge. Leave this Buoy close to on the Starboard hand, and proceed as before directed.

Coming from the Eastward or Seaward, you can run for the White Islands (before described in directions for Booth Bay) on any bearing from N.NW. to W. by S. without danger. When up with them, follow the directions before given.

High Water.

It is High Water at Hogdon's Mills about 30 minutes before it is at Boston.

John's Bay.

The entrance to this Bay is from 4 to 5 miles to the Eastward of Booth Bay, and about 10 miles NW. $\frac{3}{4}$ W. from Monhegan Island Lighthouse.

Pemaquid Point Lighthouse.

Upon Pemaquid Point, East side of entrance to John's Bay, there is a Lighthouse which shows a fixed White Light.

Bearings and Distances from Pemaquid Lighthouse.

	Distance.
Monhegan Island Lighthouse, . . . SE. $\frac{1}{4}$ E., . . .	9 $\frac{1}{2}$ miles.
Franklin Island Lighthouse, . . . E. by N. $\frac{1}{2}$ N., 6 $\frac{2}{3}$ "	"
Old Man's Ledge, off George's Island, E. by S. $\frac{1}{4}$ S., 8 $\frac{1}{4}$ "	"

Dangers.***Pemaquid Ledge.***

This Ledge, which lies off the entrance to this Bay, has 9 feet water upon it at Low Tide, and is marked on its Southeast part with a Buoy painted in Red and Black Horizontal stripes. Pemaquid Lighthouse bears from this Buoy NE. $\frac{1}{4}$ N.; distance 1 $\frac{1}{4}$ miles.

In the Lower part of the Bay, from this Buoy to John's Island, a distance of 3 miles, there are no dangers excepting those which lie near the shore.

Sailing Directions for John's Bay in Daytime, with favorable winds and fair weather.***Directions to pass within the Damiscove Islands.***

From the Westward, leave the Beacon upon the Cuckolds (before described in directions for Booth Bay Harbor) about $\frac{1}{4}$ mile to the Westward, and steer about NE. by N. until this Beacon bears W.SW.; on which bearing keep it, and steer E.NE. for the Red Buoy No. 2, off the Southwest part of Gangway Ledge. Leave this Buoy about 200 yards on the Port hand, and steer E. by S. until Pemaquid Point Lighthouse bears NE. by E. $\frac{1}{2}$ E.; then run for it on this course, leaving an Island called the Thrum Cap on the Port, and the Buoy painted in Red and Black Horizontal stripes off Pemaquid Ledge well on the Starboard hand. When this last-mentioned Buoy bears South, steer North. As you sail in, you will see in the middle of the Bay, and nearly ahead, about 2 $\frac{1}{4}$ miles above the Lighthouse, John's Island, the Southern part of which is quite high. Leave this Island, the Western part of which is bold, about 200 yards on the Starboard, and when abreast

It, steer **N. $\frac{1}{4}$ W.**, leaving Thurston's Ledge, which is $\frac{1}{2}$ mile North from John's Island, on the Starboard, and McFarling's Ledge, which is $\frac{3}{8}$ mile **NW. $\frac{1}{2}$ N.** from this last-mentioned Island, on the Port hand. After passing McFarling's Ledge, keep in the middle of the river, and run up about $1\frac{1}{4}$ miles, or where it is wider. At this place you will find good anchorage in from 4 to 5 fathoms water.

McFarling's Cove.

If you wish to enter this Cove, when abreast the Northern point of John's Island you will see Beaver Island, which is small, and lies about 300 yards to the Northward of John's Island. Continue the course **N. $\frac{1}{4}$ W.** until the centre of Beaver Island bears **E.** by **S. $\frac{1}{2}$ S.**; then make good the course **W.** by **N. $\frac{1}{2}$ N.**, leaving McFarling's Ledge, some parts of which are above water, on the Starboard, and Corbett's Ledge, which has but 4 feet water upon it at Low Tide, upon the Port hand. When the Cove is fairly open, haul to the Southwestward, and anchor in from 4 to 5 fathoms water.

At the Southern end of this Cove there is a large Porgy Factory. There is also a good harbor nearly opposite McFarling's Cove, near the entrance to Pemaquid River. If you wish to enter this last-mentioned place, leave Beaver Island (before described) about 75 yards on the Starboard hand, and haul in about **E. $\frac{1}{2}$ S.**, and anchor in from 4 to 7 fathoms water. When you are in this harbor, there will be seen to the Southward, nearly in mid-channel, between John's Island and the mainland, Knowle's Rocks. There is a narrow Channel of 10 fathoms water between these Rocks and John's Island.

Directions to pass without the Damiscore Islands.

From the Westward, leave Seguin Island from 2 to 3 miles to the Northward, and when the Lighthouse bears North, steer **E.** by **N.** On this course Bantum Ledge will be left well to the Northward. When Pemaquid Lighthouse bears **N.NE.**, run for it on this course. When from 2 to 3 miles from this last-mentioned Lighthouse, keep a sharp lookout for the Buoy painted in Red and Black Horizontal stripes off the Southeast part of Pemaquid Ledge.

Leave this Buoy about 100 yards on the Port hand, and run in **N.** by **W.** until it bears South; then steer North up the Bay for John's Island, and follow the directions before given.

From the Eastward or Seaward, after passing Monhegan Island, run for Pemaquid Point Lighthouse on any bearing from **W.** by **N.** $\frac{1}{2}$ **N.** to **N.NE.** Leave the point (which bears **SW.** by **W.** $\frac{1}{2}$ **W.** from the Lighthouse) about $\frac{1}{2}$ mile on the Starboard hand, and run up the Bay about North, leaving John's Island on the Starboard hand, and proceed as before directed.

Vessels of more than 15 feet draught should take care to avoid a Ledge having about 16 feet water upon it at Low Tide, and at this date is not Buoyed. Pemaquid Point Light bears from this Ledge **NW.** $\frac{3}{4}$ **W.**; distance $3\frac{3}{4}$ miles.

In beating in or out of John's Bay there are no obstructions until past John's Island; vessels may therefore approach near the shores without danger. After passing this last-mentioned Island, the principal danger to be avoided is Corbett's Rock, which has but 4 feet water upon it at Low Tide, and bears from the Northern point of John's Island **W.** by **N.** $\frac{1}{2}$ **N.**, distance $\frac{1}{2}$ mile. The Western part of this last-mentioned Island is bold; a part of Thurston's and McFarling's Ledges are above water.

John's Bay and River are excellent harbors of refuge for vessels bound to the Westward, especially during a heavy Westerly gale; and there are so few dangers that strangers may enter them without fear by following the above directions.

High Water.

It is High Water in John's Bay about 30 minutes before it is at Boston. Common Tides rise about 9 feet.

New Harbor.

The entrance to this small harbor is $2\frac{1}{2}$ miles **NE.** $\frac{1}{2}$ **N.** from Pemaquid Point Lighthouse; 10 miles **NW.** by **N.** from Monhegan Island Lighthouse, and about $5\frac{3}{4}$ miles West from Franklin Island Lighthouse. The harbor extends nearly East and West $\frac{1}{2}$ mile, with an average width of about 175 yards. The water at the mouth is deep, but very narrow and crooked. With a good pilot, 14 feet

water at Low Tide may be carried in for about 150 yards above the Buoy; the remaining part of the Cove is shoal water.

Sailing Directions for New Harbor in Daytime.

From the Westward, run for Pemaquid Point Light, bearing **NE.** by **N.** $\frac{1}{2}$ **N.** Leave it about $\frac{1}{2}$ mile on the Port hand, and when it bears West, steer about **NE.** $\frac{1}{2}$ **N.** 2 miles. On this course you will see two dry Rocks or Ledges, and a small Island lying near the shore, which are all left on the Port hand. After passing this Island, the harbor will open, and you will see the Red Buoy, which, in passing in, is left on the Starboard hand. On account of the Channel being narrow and crooked, it is advisable for strangers bound in to take a pilot.

From the Eastward or Seaward, after passing Monhegan Island, run for Pemaquid Point Lighthouse on any bearing from **W.** by **N.** $\frac{1}{2}$ **N.** to **N.NE.**, and follow the directions before given.

High Water.

It is High Water at New Harbor 22 minutes before it is at Boston. Common tides rise about 9 feet.

Round Pond Harbor.

The entrance to this harbor (which is situated on the Western side of Muscongus Sound) is $6\frac{3}{4}$ miles **NE.** by **N.** from Pemaquid Point Lighthouse. The harbor is a round Cove, a little less than $\frac{1}{4}$ mile in diameter, with good anchorage in all winds, with from 12 to 15 feet water at Low Tide.

Sailing Directions for Round Pond Harbor in Daytime.

From the Westward, run for Pemaquid Point Lighthouse, bearing **NE.** by **N.** $\frac{1}{2}$ **N.** Leave it about $\frac{1}{2}$ mile on the Port hand, and when it bears West, steer **NE.** $\frac{1}{2}$ **N.** When about 2 miles past the Lighthouse, you will see two dry Ledges, and also a small Island lying near the shore; these are all left about $\frac{1}{4}$ mile on the Port hand. After passing the Island, you will open New Harbor.

When the entrance to this harbor bears **W.** by **S.**, haul in more Northerly; and in order to avoid Brown's Head Ledge, follow the shore (which is bold), keeping not more than 300 yards from it.

As you enter Muscongus Sound, you will see to the Eastward the Red Buoys Nos. 2 and 4, off Weber's and Bar Island Ledges, both of which should be left well to the Eastward. After passing this last-mentioned Ledge, you will see nearly ahead, and about 300 yards from shore, two Black Buoys, Nos. 1 and 3, which lie off Poland's North and South Ledges; these Buoys are both left on the Port hand. After passing these last-mentioned Buoys, steer about **N.** by **E.** $\frac{1}{2}$ **E.** until the harbor is fairly open, bearing about **W.** by **N.** $\frac{1}{2}$ **N.**; then run in, and anchor in about $2\frac{1}{2}$ fathoms water at Low Tide, and 4 fathoms at High Tide. A Ledge extends off Northerly about 200 yards from the Southern point of this harbor; vessels, therefore, in entering it should not keep more than 75 yards from its Northern point.

From the Eastward or Seaward, after passing Monhegan Island, run for Pemaquid Point Lighthouse on any bearing from **W.** by **N.** $\frac{1}{2}$ **N.** to **N.NE.**, and follow the directions before given.

High Water.

It is High Water in Round Pond Harbor about 20 minutes before it is at Boston. Common tides rise about 9 feet.

Muscongus Harbor and Greenland Cove.

Between Round Pond Harbor and the Head of Muscongus Sound there are two Coves called Muscongus Harbor and Greenland Cove: the former lies about $1\frac{1}{2}$ miles **NE.** by **N.** from Round Pond, the latter $3\frac{1}{2}$ miles **NE.** $\frac{3}{4}$ **N.** from Round Pond; both these Coves have but little water in them at Low Tide.

Waldoboro' Harbor.

The town of Waldoboro' is situated upon the Eastern bank of the Medomak River, about 8 miles from its mouth, and $16\frac{1}{2}$ miles **NE.** by **N.** from Pemaquid Point Lighthouse. At a distance of 3 or 4 miles below the town, the water commences to shoal, so that

at Low Tide but 2 feet can be carried up to it. The passage to this River leads up through Muscongus Bay, in which there are many Rocks, Leiges, Shoals, and Islands. Near the mouth of the River are two Islands called Cow Island and Bremen Long Island, which divide the entrance into an Eastern and Western Channel. The Eastern Channel, which lies between the Eastern part of Bremen Long Island and Hungry Island, is very narrow, and on account of the current which rushes through it with great strength and velocity, it is called the Flying Passage. The Western Passage, which is on the Western side of Bremen Long Island, is called the Hocomock Channel, and is also narrow, with a rapid current in it. In this work, however, we shall only give directions for the Eastern Passage as far as Hungry Island, which is near the entrance to the Flying Passage.

Sailing Directions for Muscongus Bay in Daytime, with favorable winds and fair weather.

From the Westward, bound to Waldoboro', bring Pemaquid Point Light to bear **NE.** by **N.** $\frac{1}{2}$ **N.**, and run for it on this course. Leave the Lighthouse from $\frac{1}{2}$ to $\frac{3}{4}$ mile on the Port hand, and when it bears **W.** $\frac{3}{4}$ **S.**, make good the course **E.** $\frac{3}{4}$ **N.**, leaving the Red Buoy No. 8, off New Harbor Ledges, close to on the Port hand. Pemaquid Point Lighthouse bears from this Buoy **W.** by **S.**; distance 3 miles. When abreast this Buoy, run for Franklin Island Lighthouse, bearing **E.** by **N.** $\frac{3}{4}$ **N.** On this course the Western Egg Rock, and Western Egg Rock Ledge (upon which the sea always breaks), will be left $\frac{1}{4}$ mile on the Port hand. As you approach Franklin Island Lighthouse, the Tripod upon the Eastern Egg Rock will be seen on the Starboard hand; this Tripod is 54 feet high, and the upper half is covered with boards. Continue the course until this Tripod bears South; on which bearing keep it, and steer North for Wreck Island; distance $1\frac{1}{2}$ miles. When Franklin Island Lighthouse bears **SE.** $\frac{1}{2}$ **E.**, and is just on with the Southwestern part of Crane Island (you are then past the Ledge called the Devil's Back, which is bare at $\frac{3}{4}$ Ebb), and is left on the Port hand, and must steer Northwesterly, leaving Wreck Island at least $\frac{1}{2}$ mile upon the Starboard hand. In order to avoid the Ledges which lie off its Northern part, when the centre of this last-mentioned Island bears **SE.**, distance about $\frac{1}{2}$ mile, the course is **NE.** $\frac{1}{2}$ **N.**, leaving the Red Buoy No. 2, off Garden Island

Ledges, about $\frac{1}{3}$ mile on the Starboard, and the Black Buoy No. 1, off Cow Island Ledges, about $\frac{1}{2}$ mile on the Port hand. As you sail up the Bay, you will see on the Starboard hand two small bare Islets (connected at Low Tide) called Gull Rocks. Leave these Rocks about $\frac{1}{4}$ mile on the Starboard hand, and steer up about **N.NE.** $1\frac{3}{4}$ miles, and anchor to the Southward of Hungry Island in from 7 to 9 fathoms water. It is advisable to take a pilot here.

Coming from the Eastward, between George's Islands and Monhegan Island, leave the Buoy off the Old Man's Ledge about $\frac{1}{4}$ mile to the Northward, and steer **W.** by **N.** $\frac{1}{2}$ **N.**, leaving Shark Island, which is bold, about $\frac{1}{4}$ mile on the Starboard hand. When the Tripod upon the Eastern Egg Rock (before described) is in range with Franklin Island Lighthouse, bearing **N.NE.**, run **N.** by **W.** $\frac{1}{2}$ **W.** for the Western Egg Rock until the last-mentioned Light bears **NE.**; then steer for it until the Tripod bears South; then follow the directions before given.

High Water.

It is High Water in Waldoboro' Harbor 33 minutes before it is at Boston. Common Tides rise about 10 feet.

Friendship Harbor.

Vessels bound to this harbor may follow the directions before given for Waldoboro' Harbor or Muscongus Bay. Until they make the Gull Rocks these Islets may be left about $\frac{1}{4}$ mile on the Port hand; and when they bear **W.** $\frac{3}{4}$ **S.** make good the course **E.** $\frac{3}{4}$ **N.** about 1 mile, which will take you to the mouth of the harbor. You may then run in about **E.NE.** After passing the entrance, keep about in mid-channel and run up from $\frac{1}{3}$ to $\frac{1}{2}$ mile, and anchor in from $3\frac{1}{2}$ to 5 fathoms water.

St. George's River.

The entrance to this River is about 10 miles **E.NE.** from Pemaquid Point Lighthouse; and about the same distance **N.** by **E.** $\frac{1}{2}$ **E.** from Monhegan Island Lighthouse.

Franklin Island Lighthouse.

About 4 miles **SW.** by **W.** $\frac{1}{2}$ **W.** from the entrance of St. George's River is Franklin Island, upon the Northern part of which is a Lighthouse showing a fixed Light, varied by White Flashes. This Lighthouse bears from Pemaquid Point Light **E.** by **N.** $\frac{1}{2}$ **N.**, distance $6\frac{2}{3}$ miles; from Monhegan Lighthouse, **N.** $\frac{1}{4}$ **W.**, distance $8\frac{1}{4}$ miles.

Remarks.

The approaches to this River have a sufficient depth of water for the heaviest-draught vessels, but they are rendered extremely difficult to strangers on account of the numerous Ledges and Shoals which lie to the Southwest of it. There are usually five or six passages used by coasters, but in this work we shall only give three, which are the most direct for vessels coming from the Eastward, Westward, or Seaward. The general course of this River, from the entrance to Thomaston, the head of navigation, is **NE.** by **E.**, and distance 10 miles. About 7 feet water can be taken up to this place at Low Tide.

Sailing Directions for St. George's River in Day-time, with favorable winds and fair weather.

From the Westward, bring Pemaquid Point Light to bear **NE.** by **N.** $\frac{1}{2}$ **N.**, and run for it on this course. Leave it about $\frac{3}{4}$ mile on the Port hand, and as soon as Franklin Island Lighthouse is made, bring it to bear **E.NE.**, and run for it on this bearing, leaving the Lighthouse close aboard on the Starboard hand. When past this Light, steer about **NE.** by **E.** $\frac{3}{4}$ **E.**, and leave the Red Buoy No. 2, off the Northwest part of Jenks' Ledge, about 250 yards on the Starboard hand; distance from the last-mentioned Light, 3 miles. Thence, $\frac{7}{8}$ of a mile farther in, you will leave on the Port hand the Buoy painted in Red and Black Horizontal Stripes, off Goose Island Ledge, and $\frac{3}{4}$ mile farther on the same hand, the Black Buoy No. 1, off the Southern part of Gay Cove Ledge. After passing this last-mentioned Buoy, steer about **NE.** $\frac{1}{2}$ **E.**, keeping in the middle of the River, leaving the Black Buoy No. 3, off the Eastern part of Henderson's Ledge, on the Port hand. When you are past the Narrows, there will be seen ahead, nearly in the middle of the River, a Black Buoy, No. 5, which lies off the Eastern

part of Bailey's Ledge (which is bare at Low Spring Tides). Leave this last-mentioned Buoy on the Port hand, and steer up about **NE.** by **E.**, keeping in the middle of the River until abreast Fort St. George. Above this the channel is narrow, and the water gradually shoals to Thomaston; it is therefore advisable to take a pilot here. From the Eastward, after passing Monhegan Island, bring the Lighthouse to bear **S.SE.**, and run **N.NW.**, until Franklin Island Lighthouse bears **E.NE.**; then proceed as before directed.

Directions for George's Island, Western Channel.

From the Eastward, Westward, or Scaward, leave Monhegan Island about $1\frac{1}{2}$ miles on either hand, and after passing the Duck Rocks (the farthest of which is about $\frac{3}{4}$ mile to the Northward of this Island) bring the Lighthouse to bear **S. $\frac{3}{4}$ W.**, on which bearing keep it, and steer **N. $\frac{3}{4}$ E.**, with the Southwest point of the Outer George's Island a little on the Starboard bow. As you sail in, you will see, on the Starboard hand, the Red Buoy No. 6, off the Southwest part of the Old Man's Ledge, which is bare about two hours before Low Tide; and $\frac{1}{2}$ mile farther to the Northward, the Old Woman's Ledge, which is bare at Half Tide. Both these last-mentioned dangers are left on the Starboard hand. Continue the course **N. $\frac{3}{4}$ E.**, leaving the Southwest point of the Outer George's Island (which is bold) about 300 yards to the Eastward, and also several small Islands and Ledges to the Westward. When Franklin Island Lighthouse bears **NW.**, the Black Buoy No. 1 off the Northeast part of Seal Ledges, will be in range of this Light; and about 1 mile farther in you will see the Red Buoy No. 2, off the Northeast part of the Ledge called the Kegs, which are bare at Low Tide. Both these last-mentioned Buoys are left on the Port hand. Continue the course **N. $\frac{3}{4}$ E.**, until Franklin Island Lighthouse bears **SW.** by **W. $\frac{3}{4}$ W.**; then follow the directions before given.

Directions for George's Island, Eastern Channel.

Coming from the Eastward, outside of Matinicus Island, in order to clear all the Ledges, bring the Lighthouses upon the said Island to bear **E.** by **S. $\frac{1}{2}$ S.**, and steer **W.** by **N. $\frac{1}{2}$ N.**, until Monhegan Island Lighthouse bears **SW.** by **S. $\frac{1}{2}$ S.**; then make good the course **NE.** by **N. $\frac{1}{2}$ N.**, with the Southeastern part of Burnt

Island just on the Port bow. Leave this Island (which is bold) about 300 yards on the Port hand, and when you have passed it, steer **N. $\frac{3}{4}$ E.** $1\frac{3}{4}$ miles, to the Black Buoy off the Northwestern part of the Sisters, leaving it close to on the Starboard hand. When abreast this last-mentioned Buoy, steer **N. $\frac{1}{4}$ E.**, or directly for the Southeast point of Teal's Island; distance $1\frac{1}{4}$ miles from the Buoy on the Sisters. On this last course, the Spindle on the Old Horse Ledge will be left on the Port hand. When about 250 yards from the Southeast point of this Island, steer **NE. $\frac{3}{4}$ E.** for Hooper's Point; distance $1\frac{1}{8}$ miles. On this last course you will see, to the Northward, the Buoy painted in Red and Black Horizontal Stripes, which lies off the Southern part of Channel Rock. This Rock has 5 feet water upon it at Low Tide, and bears from Hooper's Point **W. by N.**; distance $\frac{1}{4}$ mile. Continue the course **NE. $\frac{3}{4}$ E.**, until this Buoy bears **N. by W.**; then leave it 100 yards upon either hand, and continue the course **N. by W.**, until the River is fairly open; then run up about **NE. $\frac{1}{2}$ E.**, as before directed.

High Water.

It is High Water in St. George's River about 20 minutes before it is at Boston. Common Tides rise about $9\frac{1}{2}$ feet.

Davis Straits.

These Straits (which lie between George's Islands) have a width of about 300 yards, and are distant $2\frac{1}{2}$ miles **W.SW.** from Marshal's Point Lighthouse, which is on the Eastern side of the entrance to Herring Gut Harbor. A Ledge, having about 8 feet water upon it at Low Tide, lies near the middle of the passage, and is marked on its Southeast part with a Red Buoy No. 8, which in going East is left on the Port hand. Between the Ledge and the Southern shore there is a narrow channel at Low Tide of $4\frac{1}{2}$ fathoms water. Davis Straits at many times are of great advantage to coasters, especially with strong Northerly or Southerly winds.

**Sailing Directions for Davis Straits in Daytime,
with favorable Winds and fair weather.**

From the Westward, bring Pemaquid Point Lighthouse to bear **NE.** by **N.** $\frac{1}{2}$ **N.**, and run for it on this course. Leave the Lighthouse about $\frac{3}{4}$ mile on the Port hand, and when it bears **W.** $\frac{1}{4}$ **S.**, steer **E.** $\frac{1}{4}$ **N.** As you enter the Bay, you will soon see ahead, upon the Eastern Egg Rock (which bears **E.** $\frac{1}{4}$ **N.** from Pemaquid Point Lighthouse, distance $5\frac{3}{4}$ miles), a Beacon 54 feet high, the upper half of which is covered with boards. As you approach it, you will also see, about $\frac{1}{4}$ mile to the Northward of it, the Red Buoy No. 4, which lies off a Ledge which is awash at Low Tide. Pass about midway between the Beacon and Buoy, and steer **E.** by **N.**, leaving the Black Buoy No. 1, off the Northern part of Seal Ledges (which is distant 2 miles from Egg Rock Beacon), on the Starboard hand. Continue the course **E.** by **N.** from this last Buoy, and as soon as the Red Buoy in the Straits is made, bring it to bear **E NE.**, and run for it, leaving it close to on the Port hand; and when about 20 yards past it, steer **NE.** by **E.** about 300 yards, to avoid the shoal water that makes off from the point on the Starboard hand. When you are through the Straits you will see the Black Buoy No. 5, off the Northwest part of the Sisters (bearing about **E NE.**), which you will leave close to on the Starboard hand, and steer about **NE.** by **E.** $\frac{1}{2}$ **E.**, for the Black Buoy No. 3 off the Northwestern part of Allen's Ledge. On this last course, a Spindle and Red Buoy will be left on the Port hand. When past this last Black Buoy, Herring Gut Harbor will be fairly open, and if bound into it, you may run in about midway of the entrance, leaving a Black Buoy on the Port hand, and anchor where you please. If bound farther Eastward, leave the Red Buoy off Herring Gut Lighthouse close to on the Port hand, and run **E.** $\frac{1}{4}$ **S.**, leaving the next Buoy, which is Red, off the Southeast part of Mosquito Island Ledge, on the Port hand. When abreast the last-mentioned Buoy steer about **SE.** by **E.**, leaving Great Mosquito Island about 300 yards on the Port hand. The above courses from Great Mosquito Island through Davis Straits are reversed by vessels bound to the Westward.

George's Harbor.

This small harbor, or place of anchorage, which has a depth of from 4 to 12 fathoms water in it, is between the George's Islands, and bears **N. by E. $\frac{1}{2}$ E.**, from Monhegan Island Lighthouse, distance 7 miles; and **SW. by W.** 3 miles from the Lighthouse at Herring Gut Harbor. This place of anchorage is somewhat exposed to winds from **W.NW.** to South, by way of East, but affords shelter with winds from South to **W.NW.** by way of West.

Sailing Directions for George's Harbor in Day-time, with favorable winds and fair weather.

Directions to enter this Harbor to the Westward of George's Islands.

From the Westward, leave Monhegan Island from 2 to 3 miles on the Starboard hand, and when the Lighthouse bears **S. $\frac{3}{4}$ W.**, make good the course **N. $\frac{3}{4}$ E.**, with the Southwest point of the Outer George's Island a little on the Starboard Bow. As you sail in, you will see the Buoy off the Old Man's Ledge, and $\frac{1}{2}$ mile further in the Old Woman's Ledge, both of which are left on the Starboard hand. Leave the Southwest point of the Outer George's Island, which is bold, about 300 yards on the Starboard hand, and when you are abreast it, steer **N.NE.** As you enter the Bay, you will see on the Starboard hand the narrow passage between Benner's and Allen's Islands which leads into George's Harbor; but you must still continue the course **N.NE.** about $\frac{3}{4}$ mile farther. Then the entrance to the harbor will be fairly open, bearing about **S.SE.** You may then run in, keeping midway of the entrance, and anchor in from 5 to 10 fathoms water, the entrance to the Gut bearing **SW. by W.** about 300 yards from you.

Coming from the Westward, through Egg Rock Channel, follow the directions for Davis Straits, and when abreast the Black Buoy No. 1, off the Northern part of Seal Ledges (which is left on the Starboard hand), steer **E. $\frac{3}{4}$ N.** about $1\frac{1}{4}$ miles. The entrance to the harbor will then be fairly open, bearing about **S.SE.**; then run in, and anchor as before directed.

Directions to enter this Harbor to the Eastward of George's Islands.

Coming from the Eastward, outside of Matinic Island, when past the Ledges which lie to the Southwest of it, bring Burnt Island, which is the Southeasternmost of the George's Islands, to bear N.NW., and run for it on this course. Leave the Southeastern point of this Island (which is bold) about 300 yards on the Port hand, and when you are past it, steer N. $\frac{1}{2}$ E. from $\frac{1}{2}$ to $\frac{3}{4}$ mile. The entrance to the harbor will then be fairly open, and you may run in about W.NW., leaving Little Burnt Island not less than 350 yards on the Port hand, and the next point, which is the Northeast part of Allen's Island, not less than 200 yards on the same hand, and when the Gut bears SW. by W., anchor as before directed.

From White Head, when the Northern part of Burnt Island bears West, run for it on this course, and proceed according to directions before given.

Vessels passing in or out of this harbor should take care to avoid a Ledge which makes off about 150 yards from its Southern shore.

High Water.

It is High Water in George's Harbor 30 minutes before it is at Boston. Common Tides rise about $9\frac{1}{2}$ feet.

Monhegan Island.

This Island, which is quite high, lies NE. and SW., and is a mile and one-third long. Its Southwest, Southern, Southeastern, and Eastern shores, are very bold. Near the middle of the Island, on a bare summit, is built a Lighthouse which shows a flashing White Light.

Fog Signal.

About 200 yards from the Western shore of Monhegan is a small bare Island called Mananas Island. Upon the Southwest point of this Island is a Fog Signal, giving blasts of 15 seconds at intervals of 40 seconds.

Bearings and Distances from Monhegan Island Lighthouse.

		Distance.	
Cape Cod Highland Light, . . .	SW. by S. $\frac{1}{4}$ S.,	108	miles.
Thatcher's Island Lights, . . .	SW. $\frac{3}{4}$ W.,	87 $\frac{1}{2}$	"
Isle of Shoals Lighthouse, . . .	SW. by W. $\frac{3}{4}$ W.,	74	"
Boon Island Lighthouse, . . .	SW. by W. $\frac{7}{8}$ W.,	63	"
Cape Elizabeth Lights, . . .	W. $\frac{3}{8}$ S.,	40	"
Seguin Island Lighthouse, . . .	W. $\frac{1}{4}$ N.,	19	"
Pemaquid Point Lighthouse, . .	NW. $\frac{1}{4}$ W.,	9 $\frac{1}{4}$	"
White Head Lighthouse, . . .	NE. $\frac{1}{4}$ E.,	15 $\frac{1}{4}$	"
Matinicus Rock Lights, . . .	E. by S.,	20	"
Seal Island Light (off Cape Sable),	SE. by E. $\frac{3}{4}$ E.,	148	"

Duck Rocks.

These are four bare rocky Islets, the farthest of which lies off about $\frac{3}{4}$ mile from the Northern and Northwestern shores of Monhegan Island. Upon the Western Duck Rock a Beacon 57 feet high has been built. Monhegan Island Lighthouse bears from it about **S.SE.**; distance $\frac{7}{8}$ mile. About **N.** by **W.**, $\frac{1}{4}$ mile from this Beacon, in 18 fathoms water, is placed a Whistling Buoy.

Bearings and Distances from the Whistling Buoy off to the Northward of Monhegan Island.

		Distance.	
Seguin Island Lighthouse, . . .	W.,	19	miles.
Bantum Ledge,	W.,	13 $\frac{1}{8}$	"
Northern White Island, . . .	W. by N. $\frac{3}{4}$ N.,	10 $\frac{1}{2}$	"
Pemaquid Point Lighthouse, .	NW. $\frac{1}{2}$ W.,	8 $\frac{1}{3}$	"
Beacon upon Eastern Egg Rock,	N. by W.,	5 $\frac{1}{2}$	"
Buoy off the Southern part of			
Old Man's Ledge,	NE. by N. $\frac{3}{4}$ N.,	3 $\frac{5}{8}$	"
Southeastern part of Burnt Island,	NE. $\frac{3}{4}$ N.,	5 $\frac{1}{2}$	"
Roaring Bull,	NE. by E. $\frac{3}{4}$ E.,	7 $\frac{1}{2}$	"
White Head Lighthouse, . . .	NE. $\frac{1}{2}$ E.,	15	"
Fog Signal on Southwest part of Mananas Island, . . .	S. $\frac{1}{2}$ W.,	1 $\frac{1}{8}$	"
Monhegan Island Lighthouse, .	S. by E. $\frac{3}{4}$ E.,	1 $\frac{1}{4}$	"
Lighthouses upon Matinicus Rock,	E. by S. $\frac{1}{4}$ S.,	21	"

Bearings and Distances of Dangerous Rocks and Ledges.***Moser's Ledge.***

This Ledge (which at this date is not Buoyed) has 16 feet water upon it at Low Tide. Monhegan Island Lighthouse bears from it **SE.**; distance $5\frac{1}{2}$ miles.

Sunken Duck Rock.

This Rock, upon which there are 5 feet water at Low Tide, is marked off its Northern side with a Black Buoy, No. 3. Monhegan Island Lighthouse bears from it **S.** by **E.**; distance 1 mile.

Old Man's Ledge.

This Ledge, which is bare at about Half Tide, is marked off its Southern part with a Red Buoy, No. 6. Monhegan Lighthouse bears from this Buoy **S.** by **W.** $\frac{1}{4}$ **W.**; distance $4\frac{1}{2}$ miles.

Roaring Bull.

This Ledge (which is awash at Low Tide) is marked on its Northwestern part with a Black Buoy, No. 1. Monhegan Island Lighthouse bears from this Buoy **SW.** by **W.** $7\frac{3}{4}$ miles.

Southeast Breaker.

This Ledge (some parts of which are dry at Low Tide) extends **E.NE.** and **W.SW.** about $\frac{1}{2}$ mile, and at this date is not Buoyed. Monhegan Island Lighthouse bears from it **W.SW.**; distance $7\frac{3}{4}$ miles.

Haddock Ledge.

This Rock (which at this date is not Buoyed) has 12 feet water upon it at Low Tide. Monhegan Island Lighthouse bears from it **W.** by **S.** $\frac{1}{4}$ **S.**; distance $7\frac{1}{2}$ miles.

Monhegan Harbor.

This small harbor of refuge (the entrance of which bears **W.SW.** from Monhegan Lighthouse, distance about $\frac{1}{2}$ mile) has a width of from 150 to 250 yards, and there are no obstructions or dangers in entering it from the Westward. It is exposed to Southwesterly winds.

Sailing Directions for Daytime.

Bring Monhegan Lighthouse to bear **E.NE.**, and run for it on this course. As soon as the harbor is fairly open, bearing **NE. $\frac{1}{2}$ N.**, run in, and anchor in mid-channel in from $5\frac{1}{2}$ to 7 fathoms water. From the anchorage in the harbor there will be seen to the Northeastward, nearly in mid-channel, two small bare Islets; there is a narrow Channel of 16 feet water at Low Tide between these Islets and the Western shore of Monhegan. If the wind is so strong from the Southwestward that you cannot beat out by the Western Passage, you may run out the Eastern Channel by keeping midway between the Islets and Monhegan. When you are out of the harbor, leave the first small Island about 100 yards on the Starboard hand, and run out between the Duck Islands about **NE. by N.**

Herring Gut Harbor.

This Harbor, which is much frequented by coasters, bears **NE.** by **N. $\frac{1}{2}$ N.** from Monhegan Island Lighthouse, distance $9\frac{3}{4}$ miles; and **E.** by **N.** from Pemaquid Point Lighthouse, distance $11\frac{3}{4}$ miles.

Marshall's Point Lighthouse.

Upon Marshall's Point, East side of entrance to this Harbor, is a Lighthouse which shows a fixed White Light.

Sailing Directions for Herring Gut Harbor in Daytime, with favorable winds and fair weather.

Coming from the Westward, outside of George's Islands, give Monhegan Island a berth of about 2 miles, leaving it to the Southward. When Monhegan Lighthouse bears **SW.**, make good the course **NE.** until Herring Gut Lighthouse bears **N. by W.**; then run for it on this course. As you sail in, you will see on the Port the Red Buoy No. 4, off the Eastern part of the Ledge, called the Old Cilley, which is dry at Low Tide; and also Black Rock, and Hart Island, all of which are left to the Westward. On the Starboard will be seen several Rocky Islets, the Westernmost of which are called the Gunning Rocks. Leave these last-mentioned

Rocks, which bear from Herring Gut Lighthouse **S.SE.** $\frac{5}{8}$ mile, and are bold, about 150 yards on the Starboard hand, and when past them, steer about **N.NW.** until the harbor is open; then run in, keeping about mid-channel, and anchor where you please.

Coming from the Westward, through George's Islands Passage, bound to Herring Gut Harbor, see sailing directions for Davis Straits.

From the Eastward, by way of White Head, after passing Great Mosquito Island, the centre of which bears **SW.** by **W.** $\frac{1}{2}$ **W.** from White Head Light, distance $5\frac{1}{2}$ miles, you will open Herring Gut Lighthouse, bearing about **W.NW.** Give the Southern point of this last-mentioned Island a berth of about 300 yards, and steer **NW.** by **W.**, when you will see nearly ahead the Red Buoy upon the Southern part of Mosquito Ledge. Leave this Buoy close to on the Starboard hand, and run about West, leaving the Red Buoy off the Lighthouse upon the same hand. After passing this last Buoy, haul gradually to the Northward, and when the harbor is open, run in about midway, and anchor where you please.

Beating into this Harbor in Daytime.

In beating in, the Lighthouse must be kept open to the Westward of the Westernmost Gunning Rock in order to avoid Gunning Rock Shoal, which has but 4 feet water upon it at Low Tide. This danger lies upon the Eastern side of the Channel, nearly opposite Black Rock, and bears **S.SE.** from the Lighthouse; distance about 1 mile. Care should also be taken to avoid a small Rock having but 14 feet water upon it at Low Tide; this danger lies nearly in mid-channel, about 400 yards **W.** by **S.** from the Western Gunning Rock. To avoid this danger, it is advisable, at Low Tide, when up with the Western Gunning Rock, to make short tacks to the Westward until past it. The Westernmost Gunning Rock is very bold, and may be approached within 100 yards without danger.

Vessels from the Eastward or Westward may, when Herring Gut Lighthouse bears **W.NW.**, steer for it on this course, leaving Great Mosquito Island, the Red Buoy off Mosquito Ledge, and the Red Buoy off the Lighthouse, all on the Starboard hand, and four rocky Islets, and a shoal spot of four feet, on the Port. The Lighthouse bears from the latter danger **NW.** by **W.** $\frac{1}{4}$ **W.**; distance $\frac{5}{8}$ mile.

This last Channel is the best for entering Herring Gut Harbor, with winds from North to **NE.** by **E.**

Sailing Directions for Herring Gut Harbor, at Night-time.

From the Westward, after passing Monhegan Island, bring the Light to bear **SW.**, and steer **NE.** until Herring Gut Light bears **N. $\frac{3}{4}$ W.**; then run for it on this bearing, leaving it from 200 to 300 yards on the Starboard hand. When abreast the Light, haul gradually to the Eastward, and anchor anywhere above it in mid-channel.

From White Head, steer **SW.** by **W.** until Herring Gut Light bears **N. $\frac{3}{4}$ W.**; then follow the directions before given.

It is not advisable for strangers to attempt to beat into Herring Gut Harbor at night.

High Water.

It is High Water in Herring Gut Harbor 30 minutes before it is at Boston. Common Tides rise $9\frac{1}{2}$ feet.

Mosquito Harbor.

This Harbor lies about 2 miles Northeast from Herring Gut Lighthouse, and the entrance to it, which is between Great Mosquito Island on the South, and Mosquito Head on the North, is about $2\frac{1}{2}$ miles Southwest from the Lighthouse at Tennant's Harbor; or it is the first opening to the Southwestward of the last-mentioned Lighthouse. The harbor has an average width of $\frac{1}{2}$ mile, and length of $\frac{5}{8}$ mile, with from 4 to 10 feet water in it at Low Tide.

Sailing Directions for Mosquito Harbor in Day-time, with favorable winds and fair weather.

From the Westward, after passing Great Mosquito Island, the body of which bears **E. $\frac{1}{2}$ S.** from the entrance to Herring Gut Harbor, distance 2 miles; Herring Gut Lighthouse will open to the Northward of this last-mentioned Island, bearing about **W. $\frac{1}{2}$ S.**

When this last-mentioned Lighthouse is open, bearing about **W. $\frac{1}{2}$ S.**, run in, leaving the Southwest point of Mosquito Head about 200 yards on the Starboard hand. When abreast this point, haul up **W. by N.** until the harbor is fairly open, bearing about **N. by E. $\frac{1}{2}$ E.**; then run in, keeping about midway of it, and anchor in from 4 to 10 feet water at Low Tide.

From the Eastward, after passing White Head, bring the Light to bear **E.NE.**, and steer **W.SW.**, leaving the Southwest point of Mosquito Head about 200 yards on the Starboard hand, and proceed as before directed.

High Water.

It is High Water in Mosquito Harbor about the same time it is at Herring Gut Harbor. Common Tides rise about $9\frac{1}{2}$ feet.

Tennant's Harbor.

The entrance to this excellent Harbor lies about **W. $\frac{1}{2}$ S.** from White Head Lighthouse, distance $2\frac{3}{4}$ miles; and **NE. $\frac{1}{2}$ N.** from Monhegan Lighthouse; distance $13\frac{1}{3}$ miles. It is about $1\frac{1}{4}$ miles in length, with an average width of about 500 yards.

Tennant's Harbor Lighthouse.

Upon the Eastern end of Southern Island, South side of entrance to this Harbor, a Lighthouse has been built which shows a revolving Red Light.

Sailing Directions for Tennant's Harbor in Day-time, with favorable winds and fair weather.

From the Westward, bring Monhegan Island Lighthouse to bear **SW.**, and make good the course **NE.**, leaving Mosquito Island about 1 mile to the Westward. When Tennant's Harbor Light bears North, steer **N. by E.**, leaving it at least 300 yards on the Port hand. When the harbor is fairly open, run in midway (course about **W. by N. $\frac{1}{2}$ N.**), and anchor about $\frac{1}{2}$ mile above the Lighthouse in from $3\frac{1}{2}$ to 5 fathoms water.

From the Eastward, after passing the Bell Boat off White Head, bring Tennant's Harbor Lighthouse to bear **W. $\frac{1}{4}$ S.**, and steer for it. When about $\frac{1}{2}$ mile from this Lighthouse, run about **W. by N. $\frac{1}{2}$ N.**, and anchor as before directed.

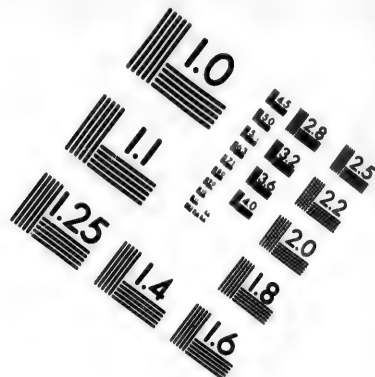
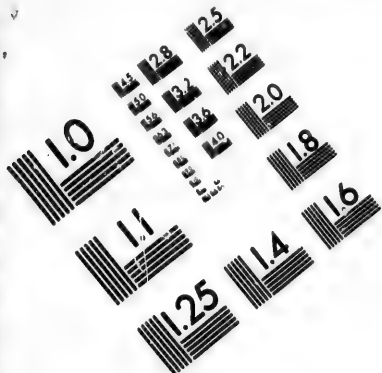
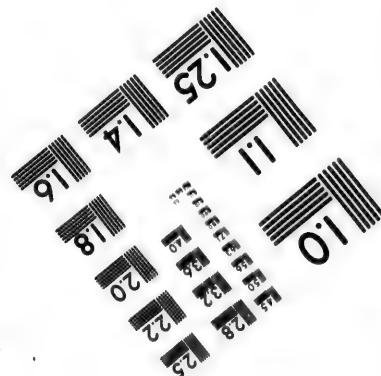
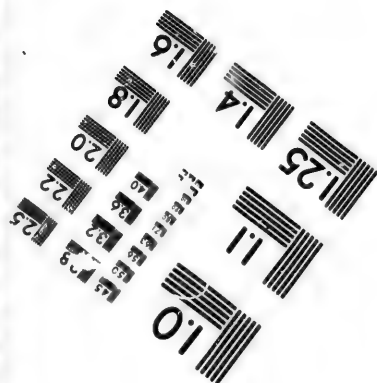
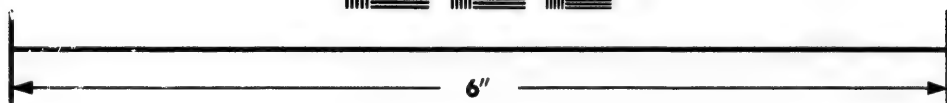
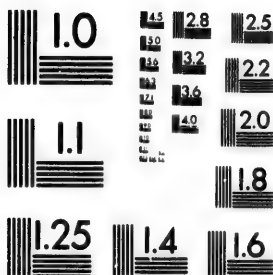


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Coming from the Eastward, through Two Bush Island Channel, when the Lighthouse at Tennant's Harbor bears **NW.** by **W.** $\frac{3}{4}$ **W.**, run for it on this course, and follow the directions before given.

Beating into Tennant's Harbor.

Metinic Ledge, which has 7 feet water upon it at Low Tide, is marked off its Southwest part with a Buoy, having Red and Black Horizontal Stripes. Herring Gut Lighthouse bears from this Buoy **NW.** by **W.**; distance $4\frac{1}{8}$ miles. From the Westward, after passing this Ledge, you may bring Tennant's Harbor Light to bear from North to **W.NW.**, until you are $\frac{3}{4}$ mile from it; then stand farther to the Northward until the Lighthouse bears **W.** by **S.** Give the shores a small berth, as there are no dangers in the harbor excepting a Ledge, which lies off the Western shore about $\frac{3}{4}$ mile above the Lighthouse; these last directions will apply to Night-time.

Sailing Directions for Tennant's Harbor at Night-time, with favorable winds and fair weather.

From the Westward, give Monhegan Island a berth of from 2 to 3 miles, leaving it to the Southward. When the Light bears **SW.** make good the course **NE.**, leaving George's Islands, the Old Cilley, and Mosquito Island, all to the Westward. On this course, the Roaring Bull, and the other Ledges Northeast from it, will be left well to the Eastward. Continue the course **NE.**, until the Light at Tennant's Harbor bears **N.** by **W.**, then run for it. Leave this Light from 300 to 400 yards on the Port hand, and gradually haul to the Westward. When it bears **S.SW.** about 400 yards, haul up **W.** by **N.** $\frac{1}{2}$ **N.**, and run in about $\frac{1}{2}$ mile, taking care not to approach the shores in less than 4 fathoms water, and anchor in from 4 to 6 fathoms.*

High Water.

It is High Water in Tennant's Harbor 44 minutes before it is at Boston. Common Tides rise about $9\frac{1}{2}$ feet.

* If a vessel with strong NE. winds and ebb tide should reach White Head Light she should not attempt (especially at night) to beat into Seal Harbor, but may safely run into Tennant's Harbor by the following directions: After passing the Bell Buoy off White Head, bring Tennant's Harbor Light to bear West, and run for it until you judge you are about $\frac{1}{2}$ mile from it, then steer about **W.NW.**, taking care not to approach either side in less than 4 fathoms. When the light bears **SE.**, anchor in from 5 to 7 fathoms water.

White Head Lighthouse.

This Lighthouse, which shows a fixed White Light, is built upon the Southeastern part of White Head Island, and is intended as a guide for vessels bound into Seal Harbor, and also through the Muscle Ridge Channel into Penobscot Bay.

Fog Signal.

A Steam Whistle has been placed near this Lighthouse, giving blasts of 8 seconds at intervals of 52 seconds.

Bearings and Distances.

White Head Lighthouse bears from		Distance.
Monhegan Island Lighthouse,	NE. $\frac{1}{4}$ E.,	15 $\frac{1}{4}$ miles.
From Matinicus Rock Lighthouses,	NW. by N. $\frac{1}{2}$ N.,	17 "
From Owl's Head Lighthouse,	SW. $\frac{1}{4}$ S.,	7 $\frac{3}{4}$ "

Owl's Head Lighthouse.

Upon the summit of a prominent headland, called Owl's Head, is built a Lighthouse, which shows a fixed White Light. This Lighthouse is intended to guide vessels into Penobscot Bay. A Fog Bell is placed near this Lighthouse.

Bearings and Distances from Owl's Head Lighthouse.

		Distance.
White Head Lighthouse,	SW. $\frac{1}{4}$ S.,	7 $\frac{3}{4}$ miles.
Brown's Head Lighthouse, entrance to Fox Island Thoroughfare,	E. $\frac{1}{2}$ S.,	6 "
Indian Island Lighthouse, entrance to Rockport Harbor,	N. $\frac{1}{2}$ E.,	4 $\frac{3}{4}$ "
Negro Island, entrance to Camden Harbor,	N. by E. $\frac{1}{4}$ E.,	6 $\frac{3}{4}$ "
The Rocky Island, called the Graves,	N. by E. $\frac{3}{4}$ E.,	5 $\frac{1}{2}$ "
Spruce Head,	NE. by N. $\frac{1}{2}$ N.,	12 $\frac{3}{4}$ "
Matinicus Rock Lighthouses,	S. $\frac{3}{4}$ E.,	20 "

Sailing Directions from Monhegan Island (by way of Muscle Ridge Channel) to Bangor in Daytime, with favorable winds and fair weather.

Coming from Seaward or the Westward, leave Monhegan Island from 2 to 3 miles on either hand, and after passing the Duck Rocks

bring the Lighthouse upon the said Island to bear **SW. $\frac{1}{4}$ W.**, on which bearing keep it, and steer **NE. $\frac{1}{4}$ E.**, for White Head. If there is no error in the compass, on this course the Southeast Breaker, Roaring Bull, and Matinic Island Ledge will all be left well to the Eastward. On the other hand, George's Islands, the Ledge called the Old Cilley, and Great Mosquito Island will all be left to the Westward. As soon as White Head Lighthouse is made, bring it to bear **NE. $\frac{1}{4}$ E.**, and run for it on this course, leaving the Bell Boat off the Western part of the South Breaker about $\frac{1}{4}$ mile on the Starboard hand. When abreast White Head Lighthouse, which must be left about 250 yards on the Port hand, steer **NE. by E.** As you enter the Muscle Ridge Channel, you will see, on the Starboard hand, the Red Spindle on Yellow Ledge, which is left to the Eastward. On the Port will be seen the Black Buoy off Hay Island Ledge, and farther in the Buoy painted in Red and Black Horizontal Stripes, off the Southwest part of Lower Gangway Ledge, both of which are left to the Westward. Leave this last-mentioned Buoy off Lower Gangway Ledge, which bears about **NE. by E.** from Whitehead Lighthouse $\frac{3}{4}$ mile, about 150 yards on the Port hand, and make good the course **NE. $\frac{1}{4}$ E. $3\frac{1}{8}$ miles** to the Beacon on the Eastern point of Ash Island. On this last course, from the Lower Gangway Ledge to Ash Point Beacon, the following will be left on the Starboard hand: First, the Red Buoy No. 2, off the Northern part of Hurricane Ledge; second, a small bare Rock; third, Otter Island, the Western part of which is bold; fourth, the Buoy painted in Red and Black Horizontal Stripes, off the Southwest part of Upper Gangway Ledge. This last-mentioned Buoy bears from the Beacon upon Ash Island Point **S. $\frac{3}{4}$ W.**, distance $\frac{1}{2}$ mile; and lastly, the Red Buoy, No. 4, off the Northwest part of the Inner Grindstone Ledges. On the Port hand will be left, first, the Black Buoy, No. 5, off the Southeast part of a Sunken Ledge; second, the Black Spindle on Garden Island Ledge; third, the Black Spindle on Otter Island Ledge; fourth, the Black Buoy, No. 7, off the Southeast part of Ash Island Ledge. The Beacon upon Ash Island Point is 57 feet high, and is painted White and Brown. Leave this Beacon about $\frac{1}{2}$ mile on the Port hand, and gradually haul to the Northward until it bears West; then run **NE. by N. $\frac{3}{4}$ N. $1\frac{1}{4}$ miles**, to the Red Buoy, No. 2, off Sheep Island Bar. On this last course, the Buoy painted in Red and Black Horizontal Stripes, off the Southwest part of NW.

Ledge, will be left about $\frac{1}{4}$ mile on the Starboard hand. When abreast the Buoy off Sheep Island Bar, which may be left close to on the Starboard hand, steer **NE.**, leaving the Black Spindle off Dodge's Point, and the Black Buoy off South from Owl's Head Light, both on the Port hand.

Sailing Directions from Owl's Head Lighthouse through West Penobscot Bay to Fort Point Lighthouse.

After passing Owl's Head about 1 mile, bring the Lighthouse to bear **SW.** by **S.** $\frac{1}{4}$ **S.**, and steer **NE.** by **N.** $\frac{1}{4}$ **N.**, 18 miles. If there is no error in the compass, this course and distance will bring you up with Brown's Head, which is the Southwest point of entrance to Belfast Bay. As you enter the Penobscot Bay on this course, **NE.** by **N.** $\frac{1}{4}$ **N.**, when from 5 to 10 miles from Owl's Head, a number of small Islands will be left from 1 to $1\frac{1}{2}$ miles on the Starboard hand. You will next pass, on the same hand, Seven Hundred Acre Island, and about 2 miles farther in a Lighthouse, which stands upon Grindel's Point, the Western part of Long Island. About 3 miles above this Lighthouse you will see, on the same hand, three small Islands, which must be left well to the Eastward, as there are several Sunken Ledges which extend about $\frac{3}{4}$ mile **NE.** by **N.** from the Northeasternmost Island. On the Port hand will be seen Rockland Harbor, the Lighthouse on Indian Island, entrance to Rockport Harbor, the small Rocky Islet called the Graves, the Lighthouse upon Negro Island at the entrance to Camden Harbor; and $6\frac{1}{2}$ miles above this last-mentioned Lighthouse, Spruce Head. When you are abreast this last-mentioned Head, the Lighthouse upon Grindel's Point, the Western point of Long Island will bear **SE.** About 2 miles above this last-mentioned Head is Great Spruce Head, and about 1 mile farther up a small inlet called Saturday Cove, and lastly, Brown's Head, which having passed, Belfast Bay will be seen to the Northwest. When past this last-named Head, steer about **E.** **NE.** As you sail up the Bay on this last course, you will see on the Starboard hand the Eastern part of Long Island, called Turtle Head, which must be left at least $\frac{1}{3}$ mile on the Starboard hand. When this Head bears **S.** $\frac{1}{2}$ **W.**, a Black Buoy, No. 1, will be seen bearing **N.** $\frac{1}{2}$ **E.** This Buoy lies off the Southwest part of Brigadier Island Ledge, and must be left on the Port hand

by vessels bound into the Penobscot River. After passing this Buoy, and Turtle Head, continue the course **E.NE.** until the Lighthouse at Fort Point bears **NE.** then run for it on this course. As you approach the Lighthouse there will be seen, about $\frac{5}{8}$ mile South from it, a Beacon, with a pole and Keg on its top; this is on Fort Point Ledge. Leave this Beacon $\frac{1}{4}$ mile on the Starboard hand, and the Black Buoy, which lies about $\frac{1}{4}$ mile to the Eastward of the Lighthouse, on the Port hand.

Sailing Directions from Fort Point Lighthouse to Bangor.

After passing the Black Buoy off Fort Point Reef bring the Lighthouse to bear **SW.** by **S.** $\frac{1}{4}$ **S.**, on which bearing keep it, and steer **NE.** by **N.** $\frac{1}{4}$ **N.** As you sail up the River you will see, nearly ahead, the Beacon on Odom's Ledge, which is painted Black, with **O. L.** in White letters on each side. This Beacon is intended to be left to the Westward. When past it keep along the Eastern shore, passing through Bucksport Narrows in mid-channel. When past Fort Knox you will enter Marsh Bay; keep about mid-way of it until you make two Red Buoys, both of which must be left on the Starboard hand. When past the Northwestern Buoy, and the reach is fairly open, steer Northeast, passing Frankfort. After passing this last-mentioned place, keep in the middle of the River, leaving the Red Spindle on Buck's Ledge (which is about 3 miles above Frankfort) on the Starboard. From the Spindle, keep in the middle of the River to Bangor.

Two Bush Channel at Night.

If you are bound into the Penobscot Bay it is not advisable, at Night, to attempt the Muscle Ridge Channel; but if there is no error in your compass, you may pass safely through Two Bush Channel into this Bay. This last-mentioned Channel is free from Rocks and Shoals, and from Crow Island Ledges to Alden's Rock, and the Ledge called the Northern Triangle, the passage is $2\frac{1}{2}$ miles in width.

Sailing Directions for Two Bush Island Channel at Night-time, with favorable winds and fair weather.

Coming from Seaward or the Westward, leave Monhegan Island from 2 to 3 miles on the Starboard hand, and when the Light bears

South, steer **E.NE.** until it bears **SW. $\frac{1}{4}$ W.**, on which bearing keep it, and steer **NE. $\frac{1}{4}$ E.** for White Head Light. On this course the Roaring Bull and Matinic Ledge will be left well to the Eastward. Continue the course for White Head Light until the Red Revolving Light on the Port hand at Tennant's Harbor bears **NW. by W. $\frac{1}{2}$ W.**, on which bearing keep it, and steer **SE. by E. $\frac{1}{2}$ E.**, until the Fixed Light at White Head bears **NW. by N.**; then make good the course **NE. by E.** As you sail in, you will see, on the Starboard hand, the Fixed Red Light upon Green Island, the Southernmost of the Fox Islands, and will also make the Fixed White Light at Brown's Head (Fox Island Thoroughfare). Bring this last-named Light to bear **NE.**, and run for it on this course until Owl's Head Light opens to the Eastward of Monroe Island, or bears **N.NW.**, and the Red Fixed Light on the Starboard at Green Island bears about **E. by S. $\frac{3}{4}$ S.**; then steer **N. by W.**, leaving Owl's Head Lighthouse about $1\frac{1}{2}$ miles on the Port hand. Continue the course **N. by W.** until the last-mentioned Light bears **SW. by S. $\frac{1}{4}$ S.**; then follow the directions before given from Owl's Head Lighthouse through West Penobscot Bay to Fort Point Lighthouse.

Two Bush Channel in Daytime.

Run **NE. $\frac{1}{2}$ E.** from Monhegan Island Lighthouse, leaving the Black Buoy off the Roaring Bull on the Starboard hand. When up with the Buoy painted in Red and Black Horizontal stripes off the Southwest part of Matinic Island Ledge (the Northern part of Matinic Island bears **E. by S.** from this Buoy, distance 2 miles), steer **E. by N. $\frac{1}{2}$ N.** until White Head Lighthouse bears **NW.**; then steer **NE. by E.** about 4 miles.* You may then run up about **N. $\frac{1}{2}$ E.**, leaving several Islands from 1 to $1\frac{1}{2}$ miles on the Port hand. After passing Owl's Head, proceed as before directed.

Sailing Directions to enter West Penobscot Bay by way of the Middle Channel, in Daytime.

When you come from sea, and make Matinicus Rock Lighthouses, you may run for them on any bearing from **NW.** to **NE.** Leave the Buoy painted in Red and Black Horizontal stripes off the Southeast Ledge (which bears **NW. by W.**, distance $1\frac{5}{8}$ miles from the last-named Lighthouses) about 200 yards on the Starboard hand,

* A Red Buoy No. 2 has been placed off the Southwest part of Crow Island Ledges. This Buoy is left well on the Port hand by vessels bound to the Eastward through Two Bush Channel. White Head Lighthouse bears **N.NW.** from this Buoy, distance about 2 miles.

and steer about **NW.** by **N.** $\frac{1}{2}$ **N.** about $3\frac{1}{2}$ miles, leaving the Buoy painted in Red and Black Horizontal stripes off Bantum Ledge (which bears **NW.** $\frac{1}{2}$ **N.** from Matinicus Rock Lighthouses, distance 5 miles) a short distance on the Starboard, and steer **N.** $\frac{1}{2}$ **E.**, leaving Ragged Island, Matinicus Island, and the Buoy painted in Red and Black Horizontal Stripes off Foster's Ledge, all on the Starboard hand, Green Island Ledges, and the Black Buoy No. 1, off the Ledge called the Northern Triangles, on the Port hand. Continue the course **N.** $\frac{1}{2}$ **E.** until Owl's Head Lighthouse opens to the Eastward of Monroe Island, or bears **N.NW.**; then steer **N.** by **W.**, leaving Owl's Head Lighthouse about $1\frac{1}{2}$ miles on the Port hand, and proceed as before directed. This last Channel should not be attempted by strangers at *night*.

Sailing Directions for East Penobscot Bay in Day-time, with favorable winds and fair weather.

From the Eastward, after passing Mount Desert Rock Lighthouse, bring it to bear **E.** by **S.**, and steer **W.** by **N.** On this course the Southern point of Isle au Haut, which bears from Mount Desert Rock Lighthouse **W.** by **N.** $\frac{3}{4}$ **N.**, distance 21 miles, will be left about 4 miles to the Northward. Continue the course **W.** by **N.** until you make the Lighthouse upon Saddleback Ledge; * this Ledge is a high Black Rock, formed somewhat like a Saddle, and lies about 4 miles **W.NW.** from the Southwestern point of the Isle au Haut. Bring the last-named Lighthouse to bear **NW.** by **N.**, and run for it, leaving it about $\frac{1}{4}$ mile on the Port hand, and make good the course **N.** $\frac{3}{4}$ **E.** about 13 miles to Eagle Island Lighthouse.† Give this last-mentioned Lighthouse a berth of about $\frac{1}{3}$ mile, leaving it on the Port hand, and when it bears West, steer **N.NW.** 6 miles. In running this last course (**N.NW.**), you will pass between several Islands, the Northernmost of which is called Western Island. About $\frac{1}{2}$ mile to the Westward of this last-named Island is a bare rock called Green Ledge. Cape Rozier, a high Bluff Head, with White Rocks here and there upon its surface, bears **N.** by **E.** $\frac{1}{2}$ **E.** from this Ledge; distance $1\frac{1}{2}$ miles. Leave Green Ledge about $\frac{1}{4}$ mile on the Starboard hand, and steer about **N.** by **E.** 7 miles. On this last course, Cape Rozier, which is bold,

* Upon Saddleback Ledge is a Lighthouse which shows a fixed White Light.

† This Lighthouse shows a fixed White Light. About $\frac{1}{2}$ mile South from this Light is a Ledge having but 16 feet water upon it at Low Tide.

and Dice Head Lighthouse (entrance to Castine Harbor), will both be left on the Starboard hand, and Black Buoy off Long Island Ledge on the Port hand. When Fort Point Lighthouse bears **NE.** by **N.**, follow the directions before given, from Monhegan to Bangor, by way of Muscle Ridge Channel.

Seal Harbor.

This Harbor lies about one mile to the Northward of White Head Lighthouse.

Sailing Directions for Seal Harbor in Daytime, with favorable winds and fair weather.

Coming from the Westward, follow the directions before given from Monhegan to Bangor, by way of Muscle Ridge Channel, until White Head Lighthouse (before described) bears **NE. $\frac{1}{4}$ E.**; then run for it on this course, leaving the Bell Boat off the Western part of the South Breaker about $\frac{1}{4}$ mile on the Starboard hand. When abreast White Head Lighthouse, which must be left about 250 yards on the Port hand, steer **NE.** about $\frac{1}{2}$ mile, leaving the Black Buoy No. 1, off the Eastern part of Hay Island Ledge (White Head Light bears from this last-named Buoy **SW. $\frac{1}{2}$ W.**, distance $\frac{1}{2}$ mile), close to on the Port hand, and run in about **N.NW.**, leaving the Black Buoy No. 1, off the Northeast part of Long Ledge, about 200 yards on the Port hand. When about 200 or 300 yards past this last-mentioned Buoy, anchor in from 4 to 5 fathoms water. In entering this harbor, after passing the Black Buoy off Hay Island Ledge, two Buoys will be left on the Starboard, one Black, the other Red.

Seal Harbor is somewhat exposed to Southeasterly gales. In order therefore to find good shelter, with indications of such gales, it is advisable for vessels of not more than 12 feet draught to haul round the Black Buoy off Long Ledge, and run up about **W.** by **N. $\frac{1}{2}$ N.** $\frac{1}{4}$ mile, and anchor under Long Ledge in about $2\frac{1}{2}$ fathoms water at Low Tide. White Head Lighthouse bears from this anchorage **S. $\frac{3}{4}$ E.**; distance about one mile.

High Water.

It is High Water in Seal Harbor 40 minutes before it is in Boston. Common Tides rise $9\frac{1}{2}$ feet.

Owl's Head Harbor.

From the Westward, follow the directions before given from Monhegan to Bangor, by way of Muscle Ridge Channel, until the Beacon upon Ash Island Point bears West about $\frac{1}{2}$ mile; then steer **NE.** by **N.** $\frac{3}{4}$ **N.** $1\frac{1}{4}$ miles to the Red Buoy No. 2, off Sheep Island Bar. When abreast this Buoy, which may be left close to on the Starboard hand, steer **NE.** by **N.** until you open the Cove; then haul in, and anchor in from $3\frac{1}{2}$ to 5 fathoms water, the Spindle on Dodge's Point Ledge bearing **NE.** by **E.**; distance about $\frac{1}{4}$ mile. At night-time, in order to avoid Dodge's Ledge, vessels entering this harbor from the Northeastward should, after passing Owl's Head Light, keep the Southern shore, which is bold, best aboard.

High Water.

It is High water in Owl's Head Harbor 23 minutes before it is at Boston. Common Tides rise about $9\frac{1}{4}$ feet.

Rockland Harbor.

This Harbor, which lies Northwesterly from Owl's Head Lighthouse, is exposed to Easterly winds.

Sailing Directions for Rockland Harbor in Day-time, with favorable winds and fair weather.

From the Westward, follow the directions before given from Monhegan to Bangor, by way of Muscle Ridge Channel, until Owl's Head Lighthouse bears **SW.** about $\frac{1}{2}$ mile; then haul up **W.** by **N.** $\frac{1}{2}$ **N.** for the town. As you sail in, you will see on the Port the Black Buoy No. 1, off Spear Rock, and farther in the Red Buoy off the Southern part of South Ledge. Leave this last-mentioned Buoy on the Starboard hand, and when about $\frac{1}{4}$ mile past it, anchor in from $4\frac{1}{2}$ to 6 fathoms water. If bound to any of the Wharves, wait until High Water.

If it is night when you pass Monhegan, follow the directions before given for Two-Bush Channel, and haul round Owl's Head at a distance of $\frac{1}{2}$ mile, leaving it on the Port hand. When Owl's

Head Light bears **SE.**, make good the course **NW.**, and anchor in from 5 to 7 fathoms water.

From the Northeastward, when past the small rocky Islet called the Graves (Camden Light bears from this Islet **N.** by **W.**, distance $1\frac{1}{4}$ miles), steer **SW.** $\frac{1}{2}$ **S.** for Jameson's Point, leaving Rockport Lighthouse, the Beacon on Portersfield Ledge, Brewster Point Ledge, and the Red Buoy No. 4, off Jameson's Point, all on the Starboard hand. After passing the last-named Buoy, which may be left close to on the Starboard hand, steer **W.SW.**, leaving the Buoy painted in Red and Black Horizontal stripes off the Southwestern part of Jameson's Ledge on the Starboard, and the Black Buoy on a shoal spot on the Port hand. After passing these Buoys, anchor in from 3 to $4\frac{1}{2}$ fathoms water.

High Water.

It is High Water in Rockland Harbor 27 minutes before it is at Boston. Common Tides rise about $9\frac{1}{2}$ feet.

Rockport Harbor.

The entrance to this Harbor bears North from Owl's Head; distance $4\frac{1}{2}$ miles.

Rockport Lighthouse.

On the Southern point of Indian Island, East side of entrance to Rockport Harbor, is a Lighthouse which shows a fixed Red Light. This Lighthouse bears from Owl's Head Lighthouse **N.** $\frac{1}{2}$ **E.** $4\frac{1}{2}$ miles.

Sailing Directions for Rockport Harbor in Day-time, with favorable winds and fair weather.

From the Westward, follow the directions before given from Monhegan to Bangor, by way of Muscle Ridge Channel. When past Owl's Head, bring the Lighthouse to bear South, and steer North, leaving the Black Buoy No. 1, off the Northeast part of Ram Island, on the Port, and the Beacon on Portersfield Ledge (Rockport Lighthouse bears from this Beacon **N.** by **E.** $\frac{1}{2}$ **E.**,

distance about $\frac{3}{4}$ mile) about $\frac{1}{4}$ mile upon the Starboard hand. When the Beacon upon Portersfield Ledge bears East about $\frac{1}{4}$ mile, then run N. by E., leaving the Lighthouse and the two Red Spindles, one below and the other above the Lighthouse, both on the Starboard hand. When past the Upper Spindle, keep midway the harbor, leaving the stone Beacon upon Harbor Ledge upon the Port hand. When past this last-mentioned Beacon, anchor nearest the Eastern shore in from 4 to 6 fathoms water.

Rockport Lighthouse bears from the Spindle off Lowell Rock N. $\frac{1}{4}$ E.; distance about $\frac{1}{2}$ mile. Vessels therefore from the Northward or Eastward may leave this Spindle about $\frac{1}{8}$ mile upon the Starboard hand, and steer North, and anchor above the Beacon as before directed.

At Night.

Portersfield Ledge, which is marked with a Beacon, is bold all around it. Rockport Light bears from this Beacon N. by E. $\frac{1}{2}$ E.; distance about $\frac{3}{4}$ mile. Vessels bound into this harbor at night should not approach Rockport Lighthouse nearer than 1 mile until it bears North; then run for it on this bearing.

On this last course, the Beacon upon Portersfield Ledge will be left about $\frac{1}{4}$ mile on the Port hand. Continue the course for the Light until you are $\frac{1}{2}$ mile from it, or judge you are past Portersfield Ledge; then haul more Westerly, leaving the Spindle off Lowell Rock and Light about $\frac{1}{4}$ mile on the Starboard hand, and steer up about N. $\frac{1}{4}$ E., keeping midway the harbor, and anchor to the Southward of the Beacon.

In beating into this harbor at night or day, the principal dangers to be avoided are Portersfield Ledge (before described), Lowell Rock, which lies about $\frac{1}{2}$ mile to the Southward of the Lighthouse, and Seal Ledge, which lies near the shore, about $\frac{5}{8}$ mile above the Lighthouse. This last-mentioned Ledge, which is marked with a Spindle, is bare at Half Tide.

High Water.

It is High Water in Rockport Harbor 28 minutes before it is at Boston. Common Tides rise about 9 feet.

Camden Harbor.

The entrance to this Harbor is about $6\frac{3}{4}$ miles Northeasterly from Owl's Head Lighthouse.

Camden Lighthouse.

Upon Negro Island, West side of entrance to Camden Harbor, is a Lighthouse which shows a fixed White Light. This Lighthouse bears from Owl's Head Lighthouse N. by E. $\frac{1}{4}$ E.; distance $6\frac{3}{4}$ miles.

Dangers in entering this Harbor.

Outer Ledges.

These are a group of dangerous Rocks (bare at Half Tide) lying Northeast about $\frac{1}{3}$ mile from Camden Lighthouse; they are marked with a Spindle painted Black, and two Buoys, one Red, the other Black. The Red Buoy, No. 2, is placed a short distance from the Southwest part of the Ledge, and bears from the Lighthouse NE. by E. $\frac{1}{2}$ E. $\frac{1}{4}$ mile; the Ship Channel is between this Buoy and the Lighthouse. The Black Buoy, No. 1, is placed off the Northern part of the Ledge.

Inner Ledges.

These Ledges, which are bare at Low Tide, are separated from the outer Ledges by a Channel about 100 yards wide, with over 8 fathoms water in it at Low Tide. They are marked with an Iron Spindle painted Red, which bears about N.NE. from the Lighthouse; distance $\frac{1}{2}$ mile.

Harbor Ledge.

This Ledge, which has about 2 feet water upon it at very Low Tides, is marked upon its Eastern part with a Black Buoy, No. 3, which in entering the harbor is left on the Port hand. This last-named Ledge bears from Camden Lighthouse N. by W. $\frac{1}{4}$ W.; distance about $\frac{1}{4}$ mile.

Sailing Directions for Camden Harbor in Day-time, with favorable winds and fair weather.

From the Westward, follow the directions before given from Monhegan to Bangor, by way of Muscle Ridge Channel. When

past Owl's Head, bring the Lighthouse to bear **S.SW.**, and steer **N.NE.**, leaving the small rocky Islet called the Graves about $\frac{1}{4}$ mile upon the Port hand. Camden Light bears from this Islet, which is bold all around it, **N. by W. $1\frac{1}{4}$ miles.** When past the Graves, run for Camden Lighthouse, bearing about **N.NW.** As you sail in, you will see the Red Buoy No. 2, off the Southwest part of the Outer Ledges; this Buoy bears from the Lighthouse **NE. by E. $\frac{1}{2}$ E.,** distance $\frac{1}{4}$ mile. Pass about midway between this last-named Buoy and the Lighthouse, leaving the latter on the Port, and steer **N. by W. $\frac{3}{4}$ W.** On this last course you will also pass midway between the Spindle upon the Inner Ledges and the Black Buoy No. 3, off the Eastern part of Harbor Ledge. When past the Spindle on the Inner Ledges, haul a little more Northerly, and anchor in Sherman's Cove in from 3 to 5 fathoms water, the Lighthouse bearing **S. $\frac{1}{4}$ W.;** distance about $\frac{3}{8}$ mile.

There is a Channel between the Northeast point of the harbor and the Outer and Inner Ledges. This passage is frequently used in coming down the Bay by those acquainted with it, but it is not advisable for strangers to attempt this Channel. The best way for them is to run down the Bay until Camden Lighthouse bears West; then run for it on this course, and pass in the Ship Channel, according to directions before given.

Beating into Camden Harbor.

In beating into this Harbor, after passing the Graves, you may bring the Lighthouse to bear from West to North. When abreast Negro Island, upon which the Lighthouse stands, the channel between the Ledges is a little more than $\frac{1}{8}$ mile wide. Negro Island may be approached in beating in at a distance of 150 yards without danger.

Sailing Directions for Night-time.

From the Westward, after passing Owl's Head, bring the Light to bear **SW. by S. $\frac{1}{2}$ S.,** and make good the course **NE. by N. $\frac{1}{2}$ N.** until Camden Light bears **NW. by N.;** then run for it on this course. Give the Light a berth of about 200 yards, leaving it on the Port hand; and when abreast it steer **N.NW.** into the harbor and anchor in from 4 to $5\frac{1}{2}$ fathoms water, the Light bearing South from you.

Coming from the Northeastward down the Penobscot Bay, keep

in the middle of it until Camden Light bears **NW.**; then run for it, and follow the directions before given.

Strangers should not attempt to beat into this Harbor at Night, when the Buoys cannot be seen.

If you are bound to town, it will be necessary, in order to reach the wharves, to wait until High Water.

High Water.

It is High Water in Camden Harbor 22 minutes before it is at Boston. Common tides rise $9\frac{1}{2}$ feet.

Lincolnville, or Duck Trap Harbor.

This Harbor, which lies upon the Western side of the Penobscot Bay, bears **NE.** by **N.** $\frac{1}{2}$ **N.** from Owl's Head Lighthouse; distance about $12\frac{1}{2}$ miles. It is somewhat exposed to **S.SW.** winds.

Sailing Directions for Lincolnville, or Duck Trap Harbor, in Daytime, with favorable winds and fair weather.

From the Westward, follow the directions before given from Monhegan to Bangor, by way of Muscle Ridge Channel, until the Lighthouse upon Grindel's Point, North side of entrance to Gilkey's Harbor, bears **SE.** by **E.**; then run **NW.** by **W.** As you sail in on this last-named course you will see on the Port the Red Buoy No. 2, off the Southern part of Haddock Ledge, which has but little water upon it at Low Tide. On the Starboard will be seen Spruce Head, which is quite bold. Pass about midway between the Buoy and Head, and when the former bears South, steer North until Spruce Head bears **E.** by **S.**; then anchor in from $5\frac{1}{2}$ to $7\frac{1}{2}$ fathoms water.

Coming down the Bay, haul round Spruce Head at a distance of 300 or 400 yards, and anchor as before directed. Spruce Head is on the Western side of the Penobscot Bay, and bears from the Lighthouse at Gilkey's Harbor about **NW.**; distance $1\frac{3}{4}$ miles.

High Water.

It is High Water at Lincolnville, or Duck Trap Harbor, 25 minutes before it is at Boston. Common tides rise about $9\frac{1}{2}$ feet.

Gilkey's Harbor.

This Harbor, which lies on the Western shore of Long Island, is well sheltered, and is easy of access; in fact, it is one of the best in the whole Bay. Its entrance is Northeasterly $12\frac{1}{2}$ miles from Owl's Head, and about NE. by E. $6\frac{3}{4}$ miles from Camden Lighthouse.

Grindel's Point Lighthouse.

Upon Grindel's Point, North side of entrance to this Harbor, is a Lighthouse, which shows a fixed White Light. This Lighthouse bears from Camden Lighthouse NE. by E. $\frac{1}{4}$ E., distance $6\frac{3}{4}$ miles; from Great Spruce Head, S. $\frac{1}{4}$ W., distance $2\frac{5}{8}$ miles. A Fog Bell is placed near this lighthouse.

Dangers.

There are no dangers in approaching this Harbor from Penobscot Bay, but there are several inside it, which at this date (1879) are not Buoyed.

Lobster Rock.

The first danger met with after passing the Lighthouse is called Lobster Rock, which is bare at Half Tide. This Rock bears SE. $\frac{3}{4}$ E. from Gilkey's Point Lighthouse; distance $\frac{2}{3}$ mile. Shoal water extends Northeasterly some distance from this Rock.

Long Ledge.

This Ledge is bare at Low Tide at a distance of $\frac{1}{4}$ mile from the Eastern shore of the Harbor, and its centre bears from Grindel's Point Lighthouse SE. $\frac{1}{2}$ E.; distance about $\frac{3}{4}$ mile.

**Sailing Directions for Gilkey's Harbor in Daytime,
with favorable winds and fair weather.**

From the Westward, follow the directions before given from Mouhegan Island to Bangor by way of Muscle Ridge Channel,

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until the Lighthouse at Gilkey's Harbor bears East; then run for it on this course until you are about ¼ mile from it, or the passage into the Harbor is fairly open; then run in, leaving the Lighthouse on the Port hand, and keeping in mid-channel in not less than 5 fathoms water until it bears NW. by N.; then haul up E. ½ N. and anchor to the Northwest of Lobster Rock in from 3 to 5 fathoms water, the Lighthouse bearing about NW. by W. ½ W. from you.

Coming down the Penobscot Bay, keep in the middle of it until the Lighthouse at Gilkey's Harbor bears S.SE.; then run in, keeping it a little on the Port bow, and when the passage leading into the Harbor is fairly open, run in and anchor as before directed. Or when you are in the Harbor, if the Lobster Rock can be seen, leave it about 200 yards on the Port hand, and steer S. by E., keeping in not less than 5 fathoms water, and anchor to the Southwest of Long Ledge in from 5 to 7½ fathoms water. There is another passage from the Southward into this Harbor, but at this date there are neither Lighthouses nor Buoys to mark the channel.

In beating into Gilkey's Harbor, after passing the Lighthouse, or when it bears N.NW., the channel is narrow for a short distance; it therefore requires a good working vessel to safely enter it, especially at Low Tide.

High Water.

It is High Water in Gilkey's Harbor 26 minutes before it is at Boston. Common tides rise about 9½ feet.

Seal Harbor.

This Harbor, which has no obstructions in entering it, lies on the Western shore of Long Island, nearly opposite Great Spruce Head, and about 3 miles Northeasterly from the Lighthouse at Gilkey's Harbor.

Sailing Directions for Seal Harbor in Daytime, with favorable winds and fair weather.

From the Westward, follow the directions before given from Monhegan to Bangor until the Lighthouse at Gilkey's Harbor bears

East; then run in, leaving the last-named Lighthouse on the Starboard hand, and follow the shore to the Northeastward, keeping not less than $\frac{1}{2}$ mile from it. As you sail in, you will see on the Port a small, low, flat, grassy Island; run in about midway between this Island and the Eastern shore, and anchor in the Cove in from 6 to 8 fathoms water, the last-named Island bearing about W. by S.; distance $1\frac{1}{4}$ miles from you.

Coming down the Penobscot Bay, bring the Lighthouse at Gilkey's Harbor to bear S. by W. $\frac{1}{2}$ W., and run for it on this course until past the small, low, flat, grassy Island before mentioned; then haul in and anchor in the Cove as before directed.

Saturday Cove.

This small Cove, which lies on the Western shore of Penobscot Bay, bears about N. by E. from the Lighthouse at Gilkey's Harbor; distance $3\frac{1}{2}$ miles.

In running up or down the Penobscot Bay, when the Cove is fairly open, run in until you strike 6 or 7 fathoms water; then anchor. This Cove is somewhat exposed to winds from NE. by N. to S.SW. by way of South.

Belfast Harbor.

From Owl's Head Lighthouse through West Penobscot Bay to Brown's Head, South side of entrance to Belfast Bay, the course is NE. by N. $\frac{1}{4}$ N., distance 18 miles; thence Northwesterly about 4 miles to the city of Belfast, which is on the West side of the River.

Remarks.

About 10 feet water can be carried up abreast the city at Low Tide, and 8 feet water can be taken to some of the wharves at Low Water. With heavy Southeast winds the Harbor abreast the city is somewhat exposed at High Water, but vessels at such times, of not more than 12 feet draught, can find good shelter between the Northeast part of the City and Bridge.

Danger.

The principal danger in entering Belfast Harbor is Steel's Ledge,

which lies on the Eastern side of the Channel, about 1 mile below the City, and is marked upon its Southern part with a Beacon and Red Buoy No. 2, and on its Northern part with the Red Buoy No. 4.

**Sailing Directions for Belfast Harbor in Daytime,
with favorable winds and fair weather.**

From the Westward, follow the directions before given from Monhegan Island to Bangor by way of Muscle Ridge Channel until past Brown's Head. When Belfast Bay is fairly open to the Northwest, run in, keeping about $\frac{1}{3}$ mile from the Western shore, which is quite bold and free from dangers. If bound to any of the wharves, at Low Tide, it will be necessary for vessels of 10 feet draught or upwards to anchor a little below the City in from $2\frac{1}{2}$ to 3 fathoms water, and wait until at least two-thirds Flood.

From Penobscot River or the Eastward, when past the Black Buoy No. 1, off the Southwest part of Brigadier Ledge, steer **W.** by **N.**, leaving the Monument and Red Buoy No. 2, off the Southern part of Steel's Ledge, on the Starboard hand. When past the last-named Ledge, run in as before directed. Turtle Head, the Eastern part of Long Island, bears from the Black Buoy No. 1, off the Southwest part of Brigadier Ledge, **S. $\frac{1}{2}$ W.** The above-named Ledge is bare at Low Tide.

The above directions for Belfast Harbor will answer for Night as well as Day.

Beating into Belfast Harbor in Daytime.

After passing Brown's Head (before described) you may approach the Western shore at a distance of $\frac{1}{3}$ mile without danger until you are abreast of the Southern part of the City, when it will be necessary for vessels of 12 feet draught to anchor and wait for Flood Tide.

Beating in at Night, after passing Brown's Head, use the Lead, and stand over to the Western shore until the water shoals to 4 fathoms at Low Tide, and $5\frac{1}{2}$ at High Tide, taking care to avoid Steel's Ledge (before described), and anchor below the city as before directed.

High Water.

It is High Water in Belfast Harbor 25 minutes before it is at Boston. Common tides rise about $9\frac{3}{4}$ feet.

Searsport Harbor.

This Harbor, which has no dangers in entering it except Brigadier Island Ledge (before described), lies about 4 miles to the Eastward of Belfast.

Sailing Directions for Searsport Harbor in Day-time, with favorable winds and fair weather.

From the Westward, bound to Searsport Harbor, follow the directions before given from Monhegan to Bangor by way of Muscle Ridge Channel until past Brown's Head (before described); then steer about **NE. $\frac{1}{2}$ N.**, when you will make Brigadier Island ahead. Continue the course for the Island until about $\frac{3}{8}$ mile from it, then run **N. by W.**, which course will lead safely up to the anchorage off the Village. In running in on this last course, the Black Buoy off Brigadier Island Ledge will be left about $\frac{3}{4}$ mile to the South-eastward.

Coming through the East Penobscot Bay, or from the Southeastward, when Dice Head (near the entrance to Castine) bears East $\frac{1}{2}$ mile, steer **NW. by N.**, leaving Turtle Head, the Eastern part of Long Island, about $\frac{1}{2}$ mile on the Port. After passing this last-named Head, bring it to bear **S. by E.**, and steer **N. by W.**, which course will lead to the anchorage.

From the Penobscot River, when past Fort Point Lighthouse, keep about $\frac{3}{4}$ mile from the Southern part of Brigadier Island until past the Black Buoy off Brigadier Island Ledge. When Turtle Head bears **S. by E.**, run in **N. by W.** as before mentioned.

Searsport Harbor is exposed to Southerly winds.

Stockton, or Cape Jellison Harbor.

This Harbor, which is exposed to Southerly winds, lies between Brigadier Island and Cape Jellison, about 3 miles to the Westward of Fort Point Lighthouse.

Dangers.

The Eastern point of entrance to this harbor is called Squaw Point. It is a sandy Bluff, about 20 feet high, and from it extends

out a long Ledge, which is bare at Low Tide; this is called Squaw Point Ledge, and is the only danger in entering the harbor. In order to avoid this Ledge, vessels bound into this harbor should keep nearest Brigadier Island.

Sailing Directions for Stockton, or Cape Jellison Harbor in Daytime, with favorable winds and fair weather.

From the Westward, follow the directions before given from Monhegan Island to Bangor, by way of Muscle Ridge Channel, until about 1 mile past the Black Buoy off the Southwest part of Brigadier Island Ledge; then run in **N.** by **E.** $\frac{1}{4}$ **E.**, taking care to keep nearest Brigadier Island, or the Western side of the harbor, and anchor where you please.

From East Penobscot Bay, when Dice Head Lighthouse bears **E.** by **S.** about $\frac{3}{4}$ mile, steer **N.** by **W.** $\frac{1}{4}$ **W.** until you make the Black Buoy off Brigadier Island Ledge; then run in as before directed.

From Penobscot River, after passing Fort Point Lighthouse, keep about $\frac{3}{4}$ mile from shore until the Harbor opens; then run in according to directions before given.

High Water.

It is High Water in Stockton or Cape Jellison Harbor 26 minutes before it is at Boston. Common Tides rise about $9\frac{3}{4}$ feet.

Fort Point Harbor.

This Harbor, which is on the West side of entrance to Penobscot River, affords excellent anchorage and good shelter.

Fort Point Lighthouse.

Upon Old Fort Point, West side of entrance to Penobscot River, is a Lighthouse which shows a fixed White Light.

Dangers.

The principal dangers in entering this harbor are Fort Point Ledge, Fort Point Reef, and Sandy Point Ledge. The former, Fort

Point Ledge, has a stone Beacon upon it, which bears from the Lighthouse **S. $\frac{1}{4}$ W.**; distance $\frac{1}{2}$ mile. The second, Fort Point Reef, which extends from the shore, is marked upon its outer part with a Black Buoy, No. 3; this last Buoy bears from the Lighthouse **E. $\frac{1}{2}$ S.**, distance $\frac{1}{4}$ mile. The latter, Sandy Point Reef, extends off about $\frac{3}{4}$ mile from the Western shore, and is marked with a Black Buoy, No. 5. Fort Point Lighthouse bears from this Buoy **SW.** by **S. $\frac{1}{2}$ S.**; distance $1\frac{5}{8}$ miles.

Sailing Directions for Fort Point Harbor in Daytime, with favorable winds and fair weather.

From the Westward, follow the directions before given from Monhegan Island to Bangor, by way of West Penobscot Bay, until past the Black Buoy off Fort Point Reef; then haul to the Northwestward, and run boldly up into the harbor, as there is nothing in the way, excepting Sandy Point Ledge (before described), on the Northern side of the harbor.

From the Eastward, follow the directions before given for East Penobscot Bay until Fort Point Lighthouse bears **NE.** by **N.**; then follow the directions before given.

Castine Harbor.

The entrance to this Harbor, which lies between Dice Head upon the North, and the Northern part of Cape Rozier on the South, is Southwesterly about 6 miles from Fort Point Lighthouse, and 20 miles Northeasterly from Owl's Head.

Dice Head Lighthouse.

Upon Dice Head, North side of entrance to Castine Harbor, is a Lighthouse which shows a fixed White Light. This Lighthouse is about 5 miles Northeasterly from Cape Rozier, 3 miles Southeast-erly from Turtle Head, the Eastern extremity of Long Island, $5\frac{1}{2}$ miles Southwesterly from Fort Point Lighthouse, and 21 miles Northeasterly from Owl's Head Lighthouse.

Remarks.

From Owl's Head, the most direct way to this harbor is to the Eastward of Long Island, the distance being 4 miles less than by the Channel to the Westward of this Island.

Sailing Directions from Owl's Head Lighthouse to Castine Harbor, by the Channel to the Eastward of Long Island, in Daytime, with favorable winds and fair weather.

From the Westward, follow the directions before given from Monhegan Island to Bangor, by way of Muscle Ridge Channel, until past Owl's Head; then bring the Lighthouse to bear **SW.** by **W. $\frac{1}{2}$ W.**; on which bearing keep it, and steer **NE.** by **E. $\frac{1}{2}$ E.**, leaving the Buoy painted in Red and Black Horizontal stripes off the Southwest part of McIntosh Ledge about $\frac{1}{3}$ mile on the Port Hand. Owl's Head Lighthouse bears from this Ledge, which is nearly dry at Low Tide, **SW.** by **W.**; distance $5\frac{1}{4}$ miles.

When abreast this last-mentioned Buoy, steer **NE.** $\frac{1}{4}$ **E.**, $7\frac{1}{2}$ miles distance, to Mark Island. On this last course, before you are abreast of Long Island, several Islands and dry Rocks will be left on the Port hand. The Egg Rock Ledges, which are dry at Low Tide, will be left at least $1\frac{1}{2}$ miles on the Starboard. When you are abreast of the Southern part of Long Island, you will see Mark Island, which lies **N.NE.** and **S.SW.**, is nearly $\frac{1}{2}$ mile in length, and about 60 feet in height, and is the Westernmost of a group of Islands. Cape Rozier bears from this last-named Island **NE. $\frac{1}{2}$ N.**; distance $3\frac{1}{2}$ miles. Leave Mark Island, which is bold, about $\frac{1}{3}$ mile on the Starboard hand, and steer **NE.** by **N. $\frac{1}{2}$ N.** until you make the Lighthouse upon Dice Head, North side of entrance to Castine Harbor; bring this Lighthouse to bear **NE.** by **N.**, and run for it on this course, leaving the Black Buoy off Long Island Ledge well to the Westward. As you approach the Lighthouse, you will see, about $\frac{1}{2}$ mile Southeast from it, a Black Buoy No. 1, which lies off Otter Rock, and farther in the stone Monument on Hosmer's Ledge, which bears **E.SE.** from the Lighthouse; distance about 1 mile. Leave the Black Buoy off the Lighthouse on the Port, and the Monument on the Ledge a short distance on the Starboard hand. When abreast the Monument, a Red Buoy will be seen to the Northeast; this is off the Middle

Ground, and must be left on the Starboard hand. When past this last Buoy, anchor anywhere between it and the Wharves in from 8 to 10 fathoms water. If you wish to go above this, it is advisable to take a pilot.

Coming through the West Penobscot Bay, from Owl's Head to Turtle Head, the Eastern part of Long Island, follow the directions before given, from Monhegan Island to Bangor, until past the last-mentioned Head, which leave about $\frac{1}{2}$ mile on the Starboard hand, and run **SE.** by **S.**, leaving Dice Head at least 1 mile on the Port hand. When the Lighthouse bears **NE.** by **N.**, then run for it until about $\frac{1}{2}$ mile from it; then steer about **E.** by **N.**, leaving the Black Buoy off Otter Rock about 200 yards on the Port, and the stone Monument on Hosmer's Ledge about 200 yards on the Starboard hand, and follow the directions before given.

Coming through East Penobscot Bay, follow the Sailing Directions before given for this Bay until Dice Head Lighthouse bears **NE.** by **N.**; then run in as before directed.

High Water.

It is High Water in Castine Harbor 18 minutes before it is in Boston. Common tides rise about $9\frac{1}{2}$ feet.

Dangers to be avoided by Vessels beating from Owl's Head to Fort Point, through West Penobscot Bay.

The following are the principal dangers, excepting those which lie near the shores.

Portersfield Ledge.

This Ledge, which is dry at Low Tide, lies $\frac{3}{4}$ mile from the Western shore, and is marked with a stone Beacon 20 feet high. Rockport Lighthouse bears from this Beacon **N.** by **E.** $\frac{1}{2}$ **E.**; distance $\frac{3}{4}$ mile.

Graves.

This is a small rocky Islet, with bold shores. Camden Lighthouse bears from the Graves **N.** by **W.**; distance $1\frac{1}{4}$ miles.

Dillingham's Ledge.

This Ledge, which at this date is not Buoyed, has 7 feet water upon it at very Low Tides, and lies $\frac{1}{2}$ mile from the Western shore.

Camden Lighthouse bears from this Ledge **SW. $\frac{1}{4}$ S.**; distance $1\frac{1}{4}$ miles.

Ledge.

A Ledge, with 7 feet water upon it, lying on the Eastern side of the Bay, about $\frac{1}{3}$ mile from two small Islands called Ensign Islands. Camden Lighthouse bears from this Ledge **W. by S. $\frac{1}{4}$ S.**; distance 4 miles.

Haddock Ledge.

This Ledge, which is nearly dry at very Low Tides, is marked off its Southwest part with a Red Buoy, No. 2. Gilkey's Harbor Lighthouse bears from this Buoy **E. SE.**; distance about 2 miles. The Ledge lies about $\frac{5}{8}$ mile from the Western shore.

Long Ledge.

A little more than one-half mile from the Western shore of Long Island is a long Ledge extending **N. NE.** and **S. SW.**, and having but little water upon it at Low Tide. This Ledge lies to the North-eastward of three small Islets, which are nearly opposite Saturday Cove.

Brigadier Island Ledge.

This Ledge, which is bare at Low Tide, extends off in a South-westerly direction from the Southwest point of Brigadier Island; it is marked upon its Southwest part with a Black Buoy, No. 1. Turtle Head, the Eastern part of Long Island, bears **S. $\frac{1}{2}$ W.** from this Buoy.

Fort Point Ledge.

This Ledge is marked with a square stone Beacon, with Mast and Keg on top. Fort Point Lighthouse bears from this Beacon **North**; distance $\frac{1}{2}$ mile.

Matinicus Rock Lights.

Upon the highest part of this Rock, near its Southwest end, are built two Lighthouses which show two fixed White Lights.

Steam Whistle and Fog Bell.

In thick weather a Steam-Whistle is sounded, giving blasts of 5 seconds at intervals of 25 seconds. In case of accident to the Whistle, a Fog Bell, struck by machinery, will be sounded during thick weather.

Bearings and Distances from Matinicus Rock Lighthouses.

		Distance.
Cape Cod (Highland Light), .	SW. $\frac{1}{2}$ S., . . .	116 miles.
Boston Light,	SW. by W. $\frac{3}{8}$ W.,	124 "
Thatcher's Island Lights, . .	SW. by W. $\frac{1}{2}$ W.,	102 "
Boon Island Light,	W. by S. $\frac{1}{8}$ S., .	81 "
Cape Elizabeth Lights, . . .	W. $\frac{1}{8}$ N., . . .	60 "
Monhegan Island Light, . . .	W by N.,	20 "
Mount Desert Rock Light, . .	E. $\frac{1}{2}$ N.,	34 "
Seal Island Light (Cape Sable),	SE. by E. $\frac{5}{8}$ E., .	125 "

Dangers to the Northward of Matinicus Lights.*Southeast Ledge.*

This Ledge, which is small, with deep water all around it, has 6 feet water upon it at Low Tide. It is marked with a Buoy, having Red and Black Horizontal stripes. Matinicus Rock Lights bear from this Buoy SE. by E. about $1\frac{1}{8}$ miles.

Bantum Ledge.

This Ledge, which is bare at Half Tide, has deep water all around it. A Buoy, painted in Red and Black Horizontal stripes, marks its position. Matinicus Rock Lights bear from this Buoy SE. $\frac{1}{2}$ S.; distance 5 miles.

Foster's Ledge.

This Ledge, which has 6 feet water upon it at Low Tide, is marked off its Southern part with a Buoy painted in Red and Black Horizontal stripes. No-Man's Land, a small wooded Island, lying about $\frac{3}{8}$ mile to the Eastward of the Northeast point of Matinicus Island, bears from this Buoy E. $\frac{1}{4}$ N., distance about 3 miles; Matinicus Rock Lights, S.SE., $6\frac{1}{2}$ miles. Vessels bound up the Bay may leave the three last-mentioned Buoys on the Starboard hand, and the Green Islands, with the Black Buoy No. 1, off the Northern Triangles, on the Port hand.

Malcom Ledges.

These dangerous Ledges, which are bare at Low Tide, lie nearly midway between Seal Island and Wooden Ball. Matinicus Rock Lights bear from them about SW.

Matinicus Island.

This Island lies about $\frac{3}{4}$ mile to the Northward of Ragged Island, and a little more than 4 miles N. by W. from Matinicus Rock Lights. Upon its Eastern shore are several coves, some of which afford anchorage for vessels of light draught; but there are many bad Ledges both to the Eastward of this and Ragged Island, some of which are nearly a mile from shore.

Matinicus Roads.

These Roads lie between Matinicus and Ragged Islands, and the anchorage is only suitable for vessels in moderate weather.

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Carver's Harbor.

This Harbor, which is on the Southwest part of the Southern Large Fox Island, lies East Northerly 26 miles from Monhegan Light; Southeasterly 9 miles from Owl's Head Lighthouse; North-easterly 16 miles from Matinicus Rock Lighthouses; and North-westerly 5 miles from Saddleback Lighthouse.

Heron Neck Lighthouse.

Upon the South Point of Green Island is a Lighthouse which shows a fixed Red Light. This Lighthouse bears from Owl's Head Light SE. nearly, distance 9 miles; from Matinicus Rock Lights, N. by E. $\frac{1}{4}$ E., distance 15 miles; from Monhegan Island Light, NE. by E. $\frac{3}{4}$ E., distance 25 miles; from Saddleback Ledge Light, W.NW., distance 6 miles.

Bay Ledge.

This dangerous Ledge, which is bare at Low Tide, is marked off its Southwest part with a Red Buoy, No. 2. Heron Neck Light bears from this Buoy N. by E. $\frac{1}{2}$ E., distance about 4 miles; Saddleback Lighthouse, E. by N., about $6\frac{1}{2}$ miles.

Remarks on Carver's Harbor.

This is not a very good harbor under any circumstances, and in approaching it there are many Ledges and sunken Rocks (but few of which are Buoyed) ; it is therefore not advisable for strangers to attempt to enter it without a pilot unless necessity compels.

**Sailing Directions for Carver's Harbor in Daytime,
with favorable winds and fair weather.**

From the Southward and Westward, bring Heron Neck Lighthouse to bear **NE.**, and run for it on this course, leaving Heron Neck Ledge (which bears **S.** by **W.** from the Lighthouse $\frac{1}{4}$ mile) a short distance on the Starboard hand. Leave the Lighthouse Point, which is quite bold, about 200 yards on the Port hand, and steer **E.** $\frac{1}{2}$ **N.** across Deep Cove, keeping the Southeast point of Green Island close aboard ; haul round the last-named point at a distance of 150 yards from it, passing midway between a dry Ledge and the Island in not less than $3\frac{1}{2}$ fathoms water.

After passing this Ledge, you will see to the Northeastward two Buoys, one Black, the other Red, lying at the mouth of the harbor ; run in between them, leaving the Black Buoy close to on the Port hand. After passing this Buoy, the harbor will be fairly open ; then run in about **NE.** by **E.**, and anchor in from 3 to 5 fathoms water, about 200 yards above the Northern point. The water is shoal above this.

Coming from the Southeastward, and making the Lighthouse upon Saddleback Ledge (see directions for East Penobscot Bay), bring it to bear **NW.** by **N.**, and run for it until you judge you are about 4 miles from it ; then steer **W.** by **N.** $\frac{1}{2}$ **N.**, leaving the Brimstone Islands well to the Northward, and keeping a sharp lookout for the Red Buoy off Bay Ledge (before described). After passing this Buoy, which may be left $\frac{1}{2}$ mile on either hand, run **NW.** by **N.** until Heron Neck Lighthouse bears **NE.** ; then run in as before directed.

High Water.

It is High Water in Carver's Harbor 27 minutes before it is at Boston. Common Tides rise about $9\frac{1}{4}$ feet.

Fox Island Thoroughfare.

This important passage, which has a depth of not less than 15 feet water at Low Tide, is much used by coasters bound East or West; its entrance is East Southerly about 4 miles from Owl's Head.

Brown's Head Lighthouse.

Upon Brown's Head, South side of entrance to Fox Island Thoroughfare, is a Lighthouse which shows a fixed White Light. This Lighthouse bears about **E. $\frac{1}{2}$ S.** from Owl's Head Lighthouse, distance 6 miles; from Beacon upon East side of Ash Island Point, **E. by N. $\frac{1}{2}$ N.**, distance 8 miles.

Whistling Buoy.

A Whistling Buoy has been placed off the entrance of this Thoroughfare in 21 fathoms water, about midway between the Red Buoy No. 6, off the Northern part of Inner Bay Ledge, and Spindle on Drunkard's Ledge.

Bearings and Distances of Prominent Objects from Whistling Buoy off entrance to Fox Island Thoroughfare.

	Distance.
Brown's Head Lighthouse, . . . E. by N. $\frac{1}{2}$ N. , . . .	2 $\frac{2}{3}$ miles.
Owl's Head Lighthouse, . . . W. by N. $\frac{1}{2}$ N. , . . .	3 $\frac{2}{3}$ "
Beacon upon Eastern part of Ash Island,	
W. by S. $\frac{1}{2}$ S. ,	5 $\frac{3}{4}$ "
Rockport Lighthouse,	
NW. by N. $\frac{1}{4}$ N. ,	6 $\frac{1}{3}$ "
Camden Lighthouse,	
N. by W. $\frac{1}{2}$ W. ,	8 "

Bearings and Distances of Dangers from Whistling Buoy off Fox Island Thoroughfare.

	Distance.
Red Buoy No. 6, off Northern part of Inner Bay Ledge.,	S.SW. , $\frac{1}{2}$ mile.
Spindle upon Drunkard's Ledge,	N.NE. , $\frac{5}{8}$ "
Spindle on Northern part of Dog Fish Ledge,	E. , 1 $\frac{1}{4}$ "
Beacon upon Southwest part of Fidler's Ledge,	NE. by E. $\frac{1}{2}$ E. , $\frac{7}{8}$ "

Between the Whistling Buoy, off entrance to Fox Island Thoroughfare, and the Lighthouse on Heron Neck, entrance to Carver's Harbor, there are many Islands, sunken Rocks, and Ledges, few of which are Buoyed at this date.

Sailing Directions for Fox Island Thoroughfare in Daytime, with favorable winds and fair weather.

From the Westward by way of Muscle Ridge Channel, follow the directions before given from Monhegan Island to Bangor until past the Beacon upon Ash Island Point. Bring this last-named Beacon to bear **W.** by **S.** $\frac{1}{2}$ **S.**, on which bearing keep it and steer **E.** by **N.** $\frac{1}{2}$ **N.**, leaving the buoy painted in Red and Black Horizontal Stripes off N. W. Ledge, and the Black Buoy No. 1 off Sheep Island Shoal, both on the Port, and the Red Buoy No 2 off Grindstone Ledge on the Starboard hand. As soon as the Lighthouse upon Brown's Head (entrance to the Thoroughfare) is made, bring it to bear **E.** by **N.** $\frac{1}{2}$ **N.**, and run for it on this course. As you approach the Lighthouse you will see on the Starboard the Red Buoys upon Inner Bay Ledge, and nearly ahead the Whistling Buoy. Leave the last-named Buoy close to on the Port and run for the Lighthouse, bearing about **E.** by **N.** $\frac{1}{2}$ **N.**, passing nearly midway between the Spindle and Beacon upon Fiddler's and Dog Fish Ledges. When a short distance from the Lighthouse you will see on the Port two large, bare Round Rocks, of a peculiar Orange color—these are called the Sugar Loaves—and a short distance to the Northeast of them the Spindle on the Fox's Ears, pass about midway between the Sugar Loaves and Lighthouse. When you are abreast the last-named Spindle, which is left on the Port hand, you will see the Buoy painted in Red and Black Horizontal Stripes off Calderwood's Ledge, and the Red Buoy No. 10 off Cross Island Ledge, both of which are left on the Port hand. After passing this last-mentioned Buoy, haul gradually to the Southeastward, keeping in mid-channel and leaving the Black Spindle off Young's Point on the Starboard hand. When nearly abreast the village of North Haven (which is on the Northern side of the passage), there will be seen nearly ahead two Buoys,—the first is painted in Red and Black Horizontal Stripes, and lies off the Southwest part of Post-Office Ledge, the second is Red No. 8, and lies off the Southeast part of Lobster Ledge. Leave both these last-named Buoys about 75 yards on the Port, and steer about **E.** by **S.** passing about midway between the Red Buoy No. 6 off the southeast part of Grindstone Ledge and the Spindle upon Iron Point Ledge. When about 150 yards past the last-named Spindle, haul over towards the Southern shore in order to avoid a Rock, having at very Low Tides but 7 feet water upon it; this Rock, which at this date is not Buoyed, lies nearly in the Channel, and bears about **NNE.** from the Spindle upon Iron Point Ledge (the last

one named) distance 250 yards. After pass'ing the last-named Spindle you will see to the Northeastward in the passage two Buoys; the first is painted in Red and Black Horizontal Stripes, and lies off the South part of Waterman's Ledge; the second is Red No. 4, and lies off the South Point of Fish Point Ledge, both these last-named Buoys are left on the Port hand. When abreast the Red Buoy No. 4, which is left close to, steer about **E.** by **S.** $\frac{5}{8}$ mile to the Spindle upon the Goose Rocks; leave this Spindle about 150 yards on the Port, and the Black Buoy off Bradstreet's Rock on the Starboard hand, and steer about **SE.** by **E.**, when you will see ahead Channel Rock, which is bold, and lies at the Eastern entrance of Fox Island Thoroughfare.

Coming through Two Bush Channel, follow the directions before given for entering the West Penobscot Bay by this Channel, until Brown's Head Lighthouse bears **E.** by **N.** $\frac{1}{2}$ **N.**; then follow the directions before given for entering the Thoroughfare.

Entering the West Penobscot Bay by the Middle Channel West of Matinicus Rock Lights, follow the directions before given for that passage until Brown's Head Lighthouse bears **E.** by **N.** $\frac{1}{2}$ **N.**; then run into the Thoroughfare as before directed.

Beating In.

In beating into Fox Island Thoroughfare, do not approach Brown's Head Lighthouse nearer than 3 or 4 miles until it bears **E.** by **N.** $\frac{1}{2}$ **N.** The narrowest part of the Channel, which is about one-half mile in width, lies between Fiddler's and Dog Fish Ledges; the former is marked with a Beacon, the latter with a Spindle. The Channel between the Red Buoy upon the Northern part of Inner Bay Ledge, and the Spindle upon Drunkard's Ledge, the two first dangers met with in beating into this Thoroughfare, is about $1\frac{1}{4}$ miles in width.

Sailing Directions to enter Fox Island Thoroughfare at Night-time.*

From the Westward, follow the directions before given for Two Bush Island Channel until Brown's Head Light bears **E.** by **N.** $\frac{3}{4}$

* The White light at Brown's Head, Western entrance to Fox Island Thoroughfare, will (after Sept. 15, 1880) show a Red light, between the bearings of **NE.** by **E.** $\frac{1}{4}$ **E.**, and **E.** by **N.** $\frac{1}{4}$ **N.** Vessels therefore at night, entering or leaving the Western entrance of the Thoroughfare, will clear the ledges by keeping in the Red light.

N. ; then run for it on this course. If there is no error in the Compass, you will pass midway between Fiddler's and Dog Fish Ledges. Continue the course for the Lighthouse, and, in order to avoid the Sugar Loaves, leave it not more than 250 yards on the Starboard hand. If you have smooth water when you are abreast the Light, anchor ; but if the wind is strong from the Westward, run farther in under short sail, and in order to avoid the Ledges upon the Port side, do not keep more than 200 yards from the Southeastern shore. As soon as the water becomes smooth, anchor in from $5\frac{1}{2}$ to 7 fathoms.

In running up the Bay at night, in order to avoid the Ledges which extend off to the Westward of the Fox Islands, do not approach the Light upon Brown's Head nearer than 4 or 5 miles until it bears **E.** by **N.** $\frac{3}{4}$ **N.**

Southern Harbor.

This Harbor is about $1\frac{1}{2}$ miles Northeasterly from Brown's Head Lighthouse, entrance to Fox Island Thoroughfare.

Sailing Directions for the Southern Harbor in Day-time, with favorable winds and fair weather.

Bound to Southern Harbor, follow the directions before given for Fox Island Thoroughfare until about $\frac{1}{2}$ mile from the Lighthouse on Brown's Head, when you will see two large round bare Rocks of a peculiar Orange color ; these are called the Sugar Loaves, and are bold on their Southwest part. Leave the Sugar Loaves about 250 yards on the Starboard hand, and make good the course **N.** by **E.** about $\frac{1}{2}$ mile, when the harbor will be fairly open ; then run up about **E.NE.**, keeping in mid-channel, and anchor in from $3\frac{1}{2}$ to 5 fathoms water.

The Large Fox Islands.

There are two large Islands known as the Fox Islands : the Southernmost is called Vinal Haven, the Northernmost North Haven.

Harbors.

On the Eastern shore of Vinal Haven there are one or two good harbors which are not, however, safe for strangers to enter without a pilot. On the Northern shore of North Haven there are also several small harbors which have good water in them, but as there are neither Lighthouses or Buoys to mark the dangers, it is thought not advisable to give directions to enter them.

High Water.

It is High Water at North Haven, Northern side of Fox Island Thoroughfare, 24 minutes before it is at Boston. Common Tides rise about 10 feet.

Deer Island Thoroughfare.

This Thoroughfare, which has a depth of from 10 to 12 feet water at Low Tide, commences near the Southern part of Deer Isle; its whole length is little more than 6 miles. Its width varies somewhat, the narrowest part being abreast of Green's Head, where it is a little over 200 yards wide; its widest part is near its Eastern end, between Lazy Gut Island and Eastern Mark Island, where it is about $\frac{7}{8}$ mile wide.

Mark Island Lighthouse.

Upon Mark Island, Western entrance to Deer Island Thoroughfare, is a Lighthouse which shows a fixed White Light. A Fog Trumpet is placed near this Lighthouse.

Note.

Masters of vessels from the Westward, bound to the Eastward, through this Thoroughfare, will remember that all Black Buoys in this passage, and also York Narrows, are left on the Starboard, and all Red Buoys on the Port hand. Buoys, painted in Red and Black Horizontal stripes, are placed upon Obstructions in the Channel.

Sailing Directions in Daytime, with favorable winds and fair weather, from the Eastern part of Fox Island Thoroughfare, through Deer Island Thoroughfare, across Jericho Sound and through York Narrows. Strangers should proceed with caution.

Coming from the Westward through Fox Island Thoroughfare, follow the directions before given for this passage until you make Channel Rock, which lies near its Eastern entrance. Leave this Rock a short distance on the Port hand, and steer about **E.** by **S.**, leaving the Red Buoy off the Southeast part of Black Ledge, on the Port hand. After passing this Buoy, you will see nearly ahead the Lighthouse at the entrance of Deer Island Thoroughfare; bring it to bear **E.** by **S.**, and run across Isle Haut Bay for it. As you draw near this Lighthouse, you will see about $\frac{1}{4}$ mile to the Northwest of it the Red Buoy No. 2, off the Southern part of Mark Island Ledge; leave this Buoy on the Port and the Lighthouse on the Starboard hand. When abreast the Lighthouse, there will be seen to the Eastward of it a Black Buoy No. 13, off Field's Ledge; next, the Buoy painted in Red and Black Horizontal stripes on Gangway Rock; leave the first Buoy 75 yards on the Starboard, and for the deepest water the Buoy with Horizontal stripes about the same distance on the Port hand. After passing this last-named Buoy, a Black Buoy No. 11 will be seen off the Northern part of Crotch Island; leave this last Buoy (which bears from the Lighthouse **E.** by **N.** $\frac{3}{4}$ **N.** about $\frac{3}{4}$ mile) on the Starboard hand. When past this last-named Buoy, the Red Buoy off Staple's Ledge will be seen; leave this Buoy on the Port hand. When past it, the course is East Northerly, leaving the Black Buoy No. 9 off Russ Island, and the Black Buoy No. 7 off Bold Island Ledge, both on the Starboard hand; the Red Buoy No. 10 off Door Rock, Red Buoy No. 8 off Haskell's Ledge, and also the Red Buoy No. 6 off White Rock, all on the Port hand. There is good anchorage Northeast from this last-mentioned Buoy. After passing the Red Buoy off White Rock a Black Spindle will be seen; this is on Haycock Rock, which is bare at low tide, and may be left about 25 yards on the Starboard hand. When abreast the Spindle, a Black Buoy, No. 3, will be seen lying about **NW.** $\frac{1}{2}$ mile from an Island; this Buoy is off East Mark Island Ledge, and may be left on the Starboard hand. When past this last Buoy, steer about

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E. by **S.** leaving the Red Buoy No. 4 off Lazygut Island, on the Port hand. When past this last-named Buoy, the Red Buoy No. 2, off Long Ledge, will be seen; leave this Buoy on the Port hand and make good the course **E. $\frac{1}{2}$ S.**, when you will soon see the Buoy painted in Red and Black Horizontal stripes off Yellow Rock Ledge; you must leave this last-named Buoy not less than 200 yards on either hand. After passing this last Buoy, you will then be near the entrance to York Narrows, and in going through them will leave on the Port hand three Buoys: the first, No. 6 Red, is off the Western part of Long Ledge; the second is No. 4 Red, and lies off the Southeastern end of Long Ledge; and the last, No. 2 Red, is off the Northeast point of Long Ledge. Near this last-named Buoy the Channel is narrow; the Buoy, which sets in about $2\frac{1}{2}$ fathoms, should therefore be passed close to.

The distance from Mark Island Lighthouse through Deer Island Thoroughfare, across Jericho Sound, and through York Narrows, is about $13\frac{1}{2}$ miles.

When past the last-named Buoy, at the Eastern entrance of York Narrows, you will then be in Blue Hill Bay, and if bound farther Eastward, may steer about East, leaving the Lighthouse at Bass Harbor, Mount Desert, not more than $\frac{1}{4}$ mile upon the Port hand. On this last run, when this Lighthouse bears **N.** by **E. $\frac{1}{2}$ E.**, you will cross Bass Harbor Bar in about 14 feet water at Low Tide, and when it bears North make good the course **E. SE.**, which will take you well to the Southward of Baker's Island, clear of all dangers.

Eggemoggin Reach.

This important Reach or Strait, which connects Penobscot Bay with Blue Hill Bay, has a depth of four fathoms at Low Tide. It lies between the villages of Brooklin, Sedgwick, and Brooksville on the North, and Deer Isle and Little Deer Island on the South. The length of the Reach is about 15 miles, and its general course **NW.** and **SE.**; its width varies from $\frac{1}{2}$ to 3 miles.

Pumpkin Island Lighthouse.

This Lighthouse, which is on the Southwest side of the Reach at its Western end, shows a Fixed White Light, and in passing through from the Westward, is left on the Starboard hand. A Fog Bell is placed near this Lighthouse.

Masters of vessels from the Westward, bound to the Eastward, through Eggemoggin Reach, should bear in mind that all Black Buoys in the passage are left on the Starboard, and all Red Buoys on the Port hand. Buoys painted in Red and Black Horizontal stripes are placed upon obstructions in the channel.

Sailing Directions for Eggemoggin Reach, in Day-time, with favorable winds and fair weather.

From the Penobscot River, bound through this passage, after passing the Beacon on Fort Point Ledge, steer about **SW.** by **S.** $\frac{1}{2}$ **S.**, passing about midway between Dice Head and the Eastern part of Long Island; haul round the Western part of Cape Rozier, passing about midway between it and Western Island. This Island bears about South from the Western part of Cape Rozier; distance $1\frac{1}{4}$ miles. When you are midway between this last-named Island and Cape, you will see to the Eastward the Lighthouse upon Pumpkin Island, which is on the Western side of entrance to the Reach; bring this Lighthouse to bear East and run for it. On this last course you will pass nearly midway between the Buoy painted in Red and Black Horizontal stripes, off the Western part of Two-Bush Ledge, and the Red Buoy No. 8, off the Southern part of Heron Island Ledge. The Lighthouse bears from the first-named Buoy **E.** by **N.** $\frac{1}{2}$ **N.** 1 mile; from the latter **E.** by **S.** $1\frac{1}{8}$ miles. As you draw nearer the Lighthouse you will see the following Buoys and Spindle: First, the Black Buoy No. 13, off the Northwest part of Meriman's Ledge (the Lighthouse bears from this Buoy **E.** $\frac{1}{2}$ **S.** $\frac{3}{8}$ mile); second, a Black Spindle on a dry Rock, about 200 yards Northeast from the Lighthouse; third, the Black Buoy No. 11, off Northwest part of Pumpkin Island Ledge (the Lighthouse bears from this Buoy **SE.** $\frac{1}{2}$ mile); fourth, the Black Buoy No. 9, off Western part of Triangles (the Lighthouse bears from this Buoy **W.SW.** $\frac{1}{2}$ mile); fifth, the Black Buoy No. 7, off Eastern end of Triangles (the Lighthouse bears from this Buoy **W.** by **S.** $\frac{1}{2}$ **S.**, distance $\frac{1}{2}$ mile); and lastly, the Black Buoy No. 5, off Northern part of Howard Ledges. The Lighthouse bears from this last-mentioned Buoy **NW.** by **W.** $\frac{1}{2}$ **W.**; distance 1 mile. All these Black Buoys going East through the Reach are left on the Starboard hand. When past the Black Buoy off the Northern part of Howard Ledges, the course is about **SE.**, keeping nearly in the middle of the passage. As you sail in, Billing's or Sargent

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Cove will be seen on the Northern side. On the Southern side will be seen the passage between Little Deer Island and Deer Isle; farther in the village of Sedgwick, which is on the West bank of Benjamin River. Stump Cove Ledge makes off about $\frac{3}{4}$ mile from the Western point of entrance to this River, and is marked off its Southern part with a Red Buoy No. 6, which in going to the Eastward is left on the Port hand.* About $1\frac{3}{4}$ miles from the entrance to the last-named River, is a Red Buoy No. 4; this is off the West part of Torrey's Ledge, entrance to Centre Harbor, and must be left on the Port hand. When past this last-named Buoy, Torrey's Islands will be seen, a short distance to the Westward of which is a remarkable bare Rock with a Reddish color, having two large White Boulders or Rocks on its summit. This is called Torrey's Castle, and is left about 300 yards on the Port hand. After passing Torrey's Castle, a Black Buoy No. 3 will be seen; this lies off the Northern part of Conary Ledge, and must be left on the Starboard hand. The Northeast point of Conary Island bears from this Buoy **SE.** by **S.**; distance 1 mile. When abreast this last-mentioned Island, which is left on the Starboard hand, steer about **SE.** by **S.**, passing between Hog and White Islands, the former of which lies on the Eastern side of the channel, and close in with the Main Land. When coming from the Westward, it appears like a mass of bare White Rock, and shows a bold bluff-head called Devil's Head. Its Northern end is also high, bare, and rocky, and when coming from the Westward the Island appears like two Rocky Hills with a small valley between them. There is good anchorage between this last-named Island and the Main Land, near the Porgy Factory. When past Devil's Head (the Southern part of Hog Island), a Black Buoy No. 1 will be seen; this is off the Northern part of Eastern Half-tide Rock, and must be left on the Starboard hand. Devil's Head bears from this last-named Buoy **N.** by **E.** about $\frac{1}{2}$ mile. Another Buoy will also be seen painted in Red and Black Horizontal stripes; this lies off the Western part of Hog Island Ledge, and is left on the Port hand. When past the last-named Buoy, steer about **E.SE.**, passing between

* From 1 to $1\frac{3}{4}$ miles **SE.** by **S.** $\frac{1}{4}$ **S.** from the Red Buoy off Stump Cove Ledge, and nearly in the middle of the passage, are two Ledges having but 11 and 13 feet water upon them at Low tide. In order to avoid these Ledges, vessels of more than 11 feet draught sailing from Benjamin River to the remarkable Rock called Torrey's Castle, should keep nearest Deer Isle.

Mahoney and Smuttynose Islands; the former Island is small, low, and dotted here and there with scrubby trees, and has a Red Buoy off its Western part, which is left on the Starboard hand; the latter is simply a bare Rock destitute of trees. When past these Islands you are then through the Reach and may steer East Northerly, leaving Pond Island and the Black Buoy off its Northwest part on the Starboard hand; after passing the last-named buoy steer about **E. by S.**, passing between a group of Islets and Rocks called the Ship and Barges. Upon one of the Rocks called the Barges (which is bare at two thirds Ebb) is placed a Black Spindle 30 feet high, and is left on the Starboard hand by vessels bound to the Eastward. After passing this Spindle you are in Blue Hill Bay, and must steer about **E. SE.** for Bass Head, leaving it and the Lighthouse not more than $\frac{1}{4}$ mile upon the Port hand. On this last run, when the Light bears **N. by E. $\frac{1}{2}$ E.**, you will cross Bass Harbor Bar in not less than 14 feet at Low Tide. When the Lighthouse bears North, make good the course **E. SE.**, which will take you well to the Eastward of Baker's Island, clear of all dangers.

If you intend to pass through Eggemoggin Reach, and are from Owl's Head, or any place in the West Penobscot Bay, follow the directions before given for Castine Harbor until you make Cape Rozier; then follow the directions for this Reach.

Buck's Harbor.

This excellent harbor, which is sheltered from all winds, lies on the Northern side of entrance to Eggemoggin Reach, about 2 miles Northeasterly from the Lighthouse upon Pumpkin Island.

Remarks.

When approaching Buck's Harbor from the Westward, it may be known by what appears to be a remarkable straight White path running from the summit of the hills down their almost perpendicular sides.

Sailing Directions for Buck's Harbor in Daytime, with favorable winds and fair weather.

From the Westward, follow the directions before given for Eggemoggin Reach until Pumpkin Island Lighthouse, on Western side of

* Pond Island is the first large Island met with after passing between Mahoney and Smuttynose Islands.

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entrance to the Reach bears about **S.S.W.**; then steer **N.N.E.**. As you sail in, you will see on the Northern shore the large Cove called Buck's Harbor, with an Island lying nearly in the middle of it; the best Channel is between this Island and the Western point, which is high and quite bold. Run in about midway between this last-named Point and Island, leaving the Buoy painted in Red and Black Horizontal stripes on Buck's Ledge on the Starboard hand, and anchor where you please.

High Water.

It is High Water in Buck's Harbor about 25 minutes before it is at Boston. Common Tides rise about $9\frac{1}{2}$ feet.

Sedgwick Village, or Benjamin River.

The entrance to this River lies upon the Northern side of Egge-moggin Reach, about 5 miles from Pumpkin Island Lighthouse.

Sailing Directions for Benjamin River in Daytime, with favorable winds and fair weather.

From the Westward, follow the directions before given for Egge-moggin Reach until you make the Red Buoy off the Southern part of Stump Cove Ledge. Leave this Buoy on the Port hand, and when the end of the Steamboat Wharf on the West bank of the River bears **N. by E. $\frac{1}{2}$ E.**, then steer in, with the end of the Wharf a little on the Port bow; this course will lead about midway between the two shores. In order to avoid a Sand Bar which extends off from the Eastern side of the River, when abreast the Steamboat Wharf, keep the Western shore best aboard, and anchor at your pleasure. About 12 feet water can be carried to this anchorage at Low Tide.

Blue Hill Harbor.

This Harbor, which lies at the Head of Blue Hill Bay, is about North 10 miles from Green Island Lighthouse, and $15\frac{1}{2}$ miles North-westerly from the Lighthouse at Bass Harbor, Mount Desert.

Green Island Lighthouse.

This Lighthouse, which shows a fixed White Light, is built upon a low bare rocky Islet called Green Island, which is Northeasterly from Eastern entrance to Eggemoggin Reach. This Light is intended as a guide to Blue Hill and Ellsworth.

Sailing Directions for approaching and entering Blue Hill Bay in Daytime, with favorable winds and fair weather.

From the Westward, by way of Eggemoggin Reach, follow the directions before given for that passage until past the Buoy painted in Red and Black Horizontal stripes (which lies Southeast about $\frac{1}{4}$ mile from Devil's Head); then steer **E. SE.** until the middle of Tinker's Island, which is a large Island lying Northeasterly from Green Island Lighthouse, bears **NE.** by **E.**; then steer for it on this course, passing between Mahoney and Smuttynose Islands; the former Island is small, low, and dotted here and there with scrubby trees; the latter is simply a bare Rock destitute of trees. When past the last-named Islands, steer about **NE.** by **E.** $\frac{3}{4}$ **E.**, leaving the Black Buoy No. 3 off Fly's Point, and the Lighthouse well on the Port hand. When past the Lighthouse, steer about **N.** $\frac{3}{4}$ **W.**, leaving the Red Buoy which lies off about $\frac{3}{4}$ mile from the Northwest part of Tinker's Island on the Starboard hand. After passing the last-named Buoy, run up the Bay, keeping about midway between Long Island and the Western shore. When nearly abreast the Northern part of the last-named Island, with Blue Hill bearing **N.** by **W.** $\frac{1}{4}$ **W.**, steer for it; which course will lead up to the entrance of the harbor, when in order to enter it safely a pilot will be necessary.

From the Eastward, bound to Blue Hill Bay Harbor, leave Baker's Island about 2 miles to the Northeastward, and steer **W**. As soon as the Lighthouse at Bass Harbor Head, Mount L made, bring it to bear **NW.** by **W.**, and run for it on this course, leaving the Red Buoy off Bunker's Ledge well on the Starboard. Leave this last-named Lighthouse not more than $\frac{1}{4}$ mile on the Starboard, and steer about **W.** by **N.** $\frac{1}{4}$ **N.** until it bears **N.** by **E.** $\frac{1}{2}$ **E.**, when you will cross Bass Harbor Bar in about 14 feet water at Low Tide. Continue the course **W.** by **N.** $\frac{1}{4}$ **N.** until Bass Harbor Head Light bears **E.** $\frac{1}{4}$ **S.**, and the extremity of the Western point of this harbor bears **N.** $\frac{1}{2}$ **E.**; then steer about

NW. by **N.** along the West shore of Mount Desert Island for the Southern point of Long Island; distance about 8 miles. As you sail up the Bay on this course, the Spindle upon the Barges will be seen, which are left about $1\frac{1}{4}$ miles on the Port; and about 2 miles farther up, Tinker's Island, which is quite large. Continue the course towards Long Island until the Northern end of Tinker's Island bears West, when the Red Buoy on the Cow and Calf will be seen; this Buoy lies off about $\frac{3}{4}$ mile **NW.** from the Northwest part of the last-named Island. Leave this Buoy well on the Port hand, and steer about **NW. $\frac{1}{2}$ W.** for the Western shore until Blue Hill Bay is fairly open; then run up as before directed. Before attempting to cross Bass Harbor Bar, it is advisable for vessels of more than 12 feet draught to wait until at least one-half Flood.

There are several sunken Ledges in Blue Hill Bay which at this date are not Buoyed; it is advisable therefore to take a pilot at Tinker's Island.

High Water.

It is High Water on Bass Harbor Bar 40 minutes before it is at Boston. Common Tides rise about $9\frac{1}{4}$ feet.

Union River and Ellsworth.

The entrance to this River, which is 13 miles Northwesterly from the Lighthouse at Bass Harbor Head, Mount Desert, and about 10 miles Northeasterly from Green Island Lighthouse (Eastern entrance to Eggemoggin Reach), lies between Oak Point on the East, and Newbury Head upon the West, running in a **N.NE.** direction for about 10 miles to Ellsworth. It has an average width of about a mile and a half for about 7 miles to Weymouth Point, where it suddenly contracts, and becomes a narrow stream only a few hundred yards wide, and gradually diminishing to about 150 yards at the town of Ellsworth.

Sailing Directions for Union River in Daytime, with favorable winds and fair weather.

From the Westward, by way of Eggemoggin Reach, follow the directions before given for that passage until past the Buoy painted in Red and Black Horizontal stripes, which lies Southeast about $\frac{1}{4}$ mile from Devil's Head; then steer about **E.SE.** until the middle of

Tinker's Island (which is a large Island lying Northeasterly from Green Island Lighthouse) bears **NE.** by **E.**; then steer for it on this course, passing between Mahoney and Smuttynose Islands. The former Island is small, low, and dotted here and there with scrubby trees; the latter is simply a bare Rock, destitute of trees. When past the last-named Islands, steer about **NE.** by **E.** $\frac{3}{4}$ **E.**, leaving the Black Buoy No. 3, off Fly's Point, and the Lighthouse, well on the Port hand. When past the Lighthouse, steer about **N.** $\frac{3}{4}$ **W.** until you make the Red Buoy which lies off about $\frac{3}{4}$ mile from the Northwest part of Tinker's Island; then haul to the Eastward, passing between this last-named Buoy and the Southeastern part of Long Island. Shoal water extends off about $\frac{1}{4}$ mile from this last point. As you sail in, you will see an Island which lies about $1\frac{1}{4}$ miles to the Eastward of the Southeast end of Long Island; this is Harwood Island. Pass in about midway between this last-named Island and Long Island and steer up about **N.NE.**, which course leads up between Newbury and Oak Points into Union Bay River. When near the head of the Bay, keep the Eastern shore best aboard to avoid Tupper Ledge, which is marked upon its outer part with a Black Buoy No. 5, which in going up is left on the Port hand. From this last Buoy to Ellsworth a pilot is necessary.

Coming from the Eastward or Westward bound to Ellsworth, keep outside of all dangers until you make the Lighthouse at Bass Harbor Head, Mount Desert; then bring it to bear **NW.** and run for it on this course, leaving the Red Buoy off Bunker's Ledge well on the Starboard hand. Leave this last-named Lighthouse not more than $\frac{1}{4}$ mile on the Starboard, and steer about **W.** by **N.** $\frac{1}{4}$ **N.** until it bears **N.** by **E.** $\frac{1}{2}$ **E.**, when you will cross Bass Harbor Bar in about 14 feet water at Low Tide. Continue the course **W.** by **N.** $\frac{1}{4}$ **N.** until Bass Harbor Head Light bears **E.** $\frac{1}{4}$ **S.**, and the extremity of the Western point of this harbor bears **N.** $\frac{1}{2}$ **E.**, then steer about **NW.** by **N.** along the West shore of Mount Desert Island, for the Southeast point of Long Island; distance about 8 miles. As you sail up the Bay on this last course, the Spindle upon the Barges will be seen, which are left about $1\frac{1}{4}$ miles on the Port hand; and also about 4 miles farther up on the Starboard, Harwood Island, which lies about $1\frac{1}{4}$ miles to the Eastward of the Southern end of Long Island. Pass about midway between this last-named Island and the Southeast

end of Long Island, and steer up about N.NE., and follow the directions before given.

Before attempting to cross Bass Harbor Bar, it is advisable for vessels of more than 12 feet draught to wait until at least one-half Flood.

High Water.

It is High Water on Bass Harbor Bar 40 minutes before it is at Boston. Common tides rise about $9\frac{1}{4}$ feet.

Deer Isle.

Upon the Western part of this Island there are several harbors, which are seldom used except by the people belonging to it; they lie somewhat out of the track of vessels bound East or West, and much better harbors can be found both among the Fox Islands and in Eggemoggin Reach. Strangers should not, therefore, attempt to enter them without a pilot.

Southeast Harbor, Deer Isle.

This Harbor lies upon the Southeast part of Deer Isle; its entrance, which is between Sheep and Lazygut Islands, is East Northerly about 6 miles from Mark Island Lighthouse, West entrance to Deer Island Thoroughfare, and West about 12 miles from Bass Harbor Lighthouse.

Sailing Directions for Southeast Harbor in Daytime, with favorable winds and fair weather.

From the Westward, follow the directions before given for Deer Island Thoroughfare until past the Black Spindle upon Haycock Rock, which is bare at Low Tide. After passing this last Rock and Spindle, you will see to the Eastward a Black Buoy. This is off East Mark Island Ledge. When about 300 yards from it, or that distance to the Westward of it, steer about North. As you sail in, you will see the Buoy, painted in Red and Black Horizontal stripes, which lies off the Eastern part of the Boat or Channel Rock; leave this last-named Buoy 200 yards on the Port hand, and steer more

Westerly, when a Black Buoy will be seen on the Port. This lies off the Northeast part of the Whale's Back Ledge, and must also be left on the Port hand. When past this last-named Buoy, steer about **NW.** for the anchorage. If you wish to go into the Inner Harbor, a pilot will be necessary.

Head Harbor (Isle au Haut).

This small Harbor, the entrance of which is near the **SE.** end of Isle Au Haut, bears **NE. $\frac{3}{4}$ E.** from Matinicus Rock Lights, distance 17 miles; from Mount Desert Rock Lighthouse, **W.** by **N. $\frac{3}{4}$ N.**, distance 20 miles.

Sailing Directions for Head Harbor in Daytime, with favorable winds and fair weather.

From the Westward, leave Matinicus Rock Lights from 2 to 3 miles to the Northward, and steer about **NE.** by **E.**, leaving Wooden Ball, Seal Rock, and the Ledges, well to the Northward. When the **SE.** Head of Isle Au Haut, which is a High Bluff, bears **NE.** by **N.**, then run for it on this course until about 3 miles from it, then steer more Northerly until this Head bears **E.NE.**; then run for it, keeping a sharp lookout for the Ledge called the Roaring Bull. The Eastern Head of Isle Au Haut bears from this Ledge **NE. $\frac{1}{4}$ E.**; distance about $1\frac{1}{2}$ miles. Continue the course **E.NE.** for the Eastern Head, until about 1 mile from it; then haul in **NE. $\frac{1}{2}$ N.**, leaving Flagstaff Point, which is bold, and lies on the Northern side of the entrance, about 250 yards on the Port hand. When abreast this last point, steer about **E.NE. $\frac{1}{2}$ mile**, leaving the next point at the entrance of the harbor about 75 yards on the Port hand. After passing this last point about 200 yards, anchor midway the harbor in about 12 feet water at Low Tide. Farther up, the water is shallow.

From the Eastward, after passing Mount Desert Rock Light, bring it to bear **E.** by **S.**, and make good the course **W.** by **N.** until the Western Head of Isle Au Haut bears **NW.**; then run for it on this course, keeping a sharp lookout for the Ledge called the Roaring Bull. The highest part of the Western Head bears

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Vessels from the Eastward or Westward, bound into this harbor, should endeavor to make the Ledge called the Roaring Bull.* It lies about $1\frac{1}{4}$ miles off the South shore of the Island, about midway between the Eastern and Western Heads, and breaks with a little motion of the sea. After making this Ledge, you may pass it on either hand, and bring it to bear **S.SW.**, on which bearing keep it, and run **N.NE.** for Flagstaff Point; distance $1\frac{1}{2}$ miles. This point is bold, and may be left about 250 yards on the Port hand, when the course into the harbor is as before given. In order to avoid the Ledges which lie off the Eastern Head, vessels with a smooth sea should not approach it nearer than $1\frac{1}{2}$ miles until the Western Head bears **NW.**

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High Water.

It is High Water in Head Harbor (Isle Au Haut) 58 minutes before it is at Boston. Common tides rise about $9\frac{3}{4}$ feet.

Burnt Coat Harbor.

This Harbor, which is capable of sheltering a large number of vessels, is one of the best on the coast of Maine. It lies on the South shore of Burnt Coat Island. Its entrance bears from Mount Desert Rock Light **NW. $\frac{3}{4}$ N.**, distance about $16\frac{1}{2}$ miles; from Matinicus Rock Lights, **NE.** by **E.**, about 28 miles. About 5 fathoms water can be taken into this harbor.

Range Lights.

Upon Hoekomock Head, Northwest side of entrance to Burnt Coat Harbor, are two Lighthouses, about 100 feet apart, ranging nearly **NE. $\frac{3}{4}$ N.** and **SW. $\frac{3}{4}$ S.**

Sailing Directions for Burnt Coat Harbor in Daytime, with favorable winds and fair weather.

From the Westward, pass about 3 miles South of Matinicus Rock Lighthouses, and make good the course **NE.** by **E.**, leaving

* An Iron Spindle has been placed upon this Ledge.

the dangerous Ledge called the Roaring Bull (which lies about $1\frac{1}{2}$ miles South from the Southern shore of Isle Au Haut) well on the Port hand. When the Southeast part of the Isle Au Haut, which is a High Bluff, bears **NW.** by **W.** about 4 miles, then steer **NE.**, and as soon as the Lighthouses at Burnt Coat Harbor are made, bring them in range and run for them in range; course about **NE. $\frac{3}{4}$ N.** When about 3 miles from the Lighthouses, you will see the Black Buoy No. 1, off the Southwest part of Heron Island Ledge, which on the range will be left a short distance on the Port hand. As you approach the Lighthouses, you will see, about $\frac{1}{2}$ mile West from them, the Black Buoy No. 3, off the Southeast part of Gooseberry Island Ledge, which is left on the Port hand; and farther in, at the entrance of the harbor, about $\frac{1}{4}$ mile to the Southward of the Lighthouses, in nearly mid-channel, a Red Spindle, which is on Harbor Ledge. Give this Spindle a berth of about 50 yards, leaving it on the Starboard hand, and run up about $\frac{1}{3}$ mile, and anchor in the harbor.

From the Eastward, bring Mount Desert Rock Light to bear **SE. $\frac{1}{4}$ E.**, on which bearing keep it, and steer **NW. $\frac{1}{4}$ W.**, leaving Long Island about 3 miles upon the Starboard hand. When abreast this last-mentioned Island, keep a sharp lookout for the large Red Buoy No. 2, off the Southwest part of John's Island Ledge. Long Island bears from it **E. $\frac{1}{2}$ S.** about 2 miles. Leave this last-named Buoy on the Starboard hand, and steer **NW. $\frac{1}{2}$ W.** until the harbor Lights are in range; then run in as before directed.

Dangers to be avoided in beating in.

In beating into this Harbor, care should be taken to avoid Heron Island Ledge, which is marked off its Southern part with a Black Buoy, No. 1. The Lighthouses bear from this Buoy **NE. $\frac{1}{2}$ N.**; distance about 3 miles. Also Gooseberry Ledge, which is marked off its Southern part with a Black Buoy, No. 3. The Northern Lighthouse bears from this Buoy **E. $\frac{1}{2}$ N.**; distance $\frac{1}{2}$ mile. The Northern Lighthouse bears from Harbor Island Ledge (which is marked with a Spindle) **N. by W.**; distance about $\frac{1}{4}$ mile. The channel, which is between this Ledge and Lighthouse, is therefore narrow, but the Head on which the Lighthouses stand is bold, and may be safely approached within a cable's length.

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Sailing Directions for Night-time.

From the Eastward or Westward, keep outside all the Islands and Ledges until the Lights at Burnt Coat Harbor are in range (then run for them in range); course about NE. $\frac{3}{4}$ N., until you judge you are about 150 yards from the shore, or the Lights are close aboard; then run E. by N. about $\frac{1}{4}$ mile to the anchorage. In running this last course, E. by N., keep a sharp lookout for the Spindle on Harbor Island Ledge, which lies S. by E. from the Northern Light, distance $\frac{1}{4}$ mile, and in going in may be left 100 feet on the Starboard hand.

Bass Harbor.

This Harbor is situated upon the Southwest extremity of Mount Desert Island. Its entrance bears N. by W. $\frac{1}{4}$ W. from Mount Desert Rock Lighthouse, distance 18 miles; from Baker's Island Lighthouse, W. $\frac{1}{2}$ N., distance 6 miles. About 6 fathoms water can be carried into the outer harbor.

Bass Harbor Head Lighthouse.

Upon Bass Harbor Head, which is on East side of entrance to this Harbor, is a Lighthouse which shows a fixed Red Light. At this date (1879) a Fog Bell is placed near this Lighthouse.

Sailing Directions for Bass Harbor in Daytime, with favorable winds and fair weather.

Coming from the Westward, outside of all the Ledges and Islands, as soon as Baker's Island Lighthouse is made, bring it to bear NE. by N. and run for it on this course, leaving the Great and Little Duck Islands about 2 miles on the Port hand. When past these two last-named Islands, haul in about N.NE. until the Lighthouse at Bass Harbor bears NW.; then run in for it on this course, leaving it about $\frac{1}{4}$ mile on the Starboard hand, and steer about W. by N. When the Lighthouse bears N. by E. $\frac{1}{2}$ E., you will cross Bass Harbor Bar in about 14 feet water at Low Tide. Continue the course W. by N. across the Bar, when the harbor will open, and you will see, about a mile to the Northwestward of

the Lighthouse, two Buoys. The Red Buoy, No. 2, lies off the Western part of Weaver's Ledge, which is dry at Low Tide; the Black Buoy, No. 1, lies off the Eastern part. When this last-mentioned Buoy bears **N. by W.**, run in about North, leaving it on the Port hand. Large or heavy-draught vessels may anchor when past this Buoy a short distance; but wishing to enter the Inner Harbor, when the Western point of the harbor bears **W.SW.**, run up about **N.NE.** through the Narrows, leaving the Black Buoy off Harbor Point Ledge on the Port hand. When past this Buoy, and abreast the Eastern Long Wharf on the Eastern shore of the Narrows, steer about 300 yards **N.NW.** and anchor in about 3 fathoms water off the wharves. It is not safe for strangers to go above this.

From the Westward, by way of Eggemoggin Reach, or coming through Deer Island Thoroughfare and York Narrows, follow the directions before given for those passages until you make Bass Harbor Head Lighthouse; then bring it to bear about **E. by S. $\frac{1}{2}$ S.**, and run for it, leaving the Black Buoy No. 1, off the Eastern part of Weaver's Ledge, on the Port hand, and follow the directions before given.

From the Eastward, leave Baker's Island Lighthouse about 2 miles on the Starboard hand, and steer about **W. by N.** until Bass Harbor Lighthouse bears **NW.**; then run in as before directed.

Beating into Bass Harbor.

From Seaward, beating into this Harbor at Night or Day, you may stand to the Westward until the Red Light at the entrance bears **NW. $\frac{1}{2}$ N.**, and to the Eastward until it bears **W.NW.** The channel between the Lighthouse and Eastern part of Weaver's Ledge (which is marked with a Black Buoy, No. 1) is about $\frac{1}{2}$ mile wide; it is therefore necessary, after passing the Lighthouse, to keep the Eastern shore best aboard. The Lighthouse bears from this last-mentioned Buoy on Eastern part of Weaver's Ledge, **SE. by E.** about $\frac{1}{4}$ mile.

Sailing Directions for Bass Harbor at Night-time with favorable winds and fair weather.

From Seaward, as soon as the Red Light at Bass Harbor is made, bring it to bear **NW.**, and run for it on this course. Leave

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this Light not more than $\frac{1}{4}$ mile on the Starboard hand, and haul round it, keeping a sharp lookout for the Buoy off the Eastern part of Weaver's Ledge, and follow the Eastern shore, course about N. by W. (keeping about $\frac{1}{4}$ mile from it), into the harbor. When the Light bears about SE., anchor in the Outer Harbor in from 6 to 8 fathoms water. By keeping about $\frac{1}{4}$ mile from the Eastern shore you will pass in midway between it and the Buoy off Eastern part of Weaver's Ledge.

In running into Bass Harbor from Seaward, when the Light bears N. by E. $\frac{1}{2}$ E. $\frac{1}{4}$ mile, you will cross the Bar in about 14 feet water at Low Tide. It is, therefore, advisable for heavy-draught vessels to wait until at least half Flood before attempting to cross this Bar.

High Water.

It is High Water in Bass Harbor 28 minutes before it is at Boston. Common tides rise about 10 feet. It is High Water on Bass Harbor Bar a little before it is in the harbor.

Mount Desert Rock Lighthouse.

This Lighthouse, which shows a fixed White Light, is erected upon a small barren Islet called Mount Desert Rock. At this date (1879) a Fog Bell is placed near this Lighthouse.

Dangers near Mount Desert Rock Lighthouse.

It is said that SW. by S., a little more than $\frac{1}{2}$ mile from this Lighthouse, is a dangerous Rock, having but 18 feet water upon it at Low Tide.

Bearings and Distances from Mount Desert Rock Lighthouse.

		Distance.
Cape Cod (Highland) Lighthouse,	SW. $\frac{1}{2}$ W.,	143 miles.
Thatcher's Island Lighthouses		
(Cape Ann),	W. SW., . . .	133 "
Boon Island Lighthouse, . . .	W. by S. $\frac{1}{4}$ S.,	114 "
Matinicus Rock Lighthouses, . .	W. $\frac{1}{2}$ S., . . .	34 "
Baker's Island Lighthouse, . .	N. $\frac{1}{2}$ E., . . .	16 $\frac{1}{2}$ "
Petit Menan Lighthouse, . . .	NE. $\frac{1}{4}$ N., . . .	26 "
Machias Seal Island Lighthouses,	E. by N. $\frac{3}{4}$ N.,	54 "
Northern part of Grand Menan,	NE. by E. $\frac{3}{4}$ E.,	76 "

Brier's Island Lighthouse, North side of entrance to St. Mary's Bay,	E. $\frac{1}{4}$ S.,	Distance. 77 miles.
Cape Forchu Lighthouse, entrance to Yarmouth Harbor,	E. SE.,	86 "
Seal Island Lighthouse (Cape Sable),	SE. $\frac{3}{4}$ E.,	98 $\frac{1}{2}$ "

South-West Harbor (Mount Desert).

This fine harbor, which is on the Southern part of Mount Desert Island, lies Northeast 38 miles from Matinicus Rock Lighthouses; Northwesterly 20 miles from Mount Desert Rock Lighthouse; and West Southerly 20 miles from Petit Menan Lighthouse.

Baker's Island Lighthouse.

Upon Baker's Island, the Southeasternmost of the group lying off the South shore of Mount Desert, is a Lighthouse which shows a fixed Light varied by White flashes. The Lighthouse at Winter Harbor bears from Baker's Island Lighthouse NE. $\frac{1}{4}$ E.; distance 9 miles. Petit Menan Lighthouse bears from Baker's Island Lighthouse E. by N. $\frac{1}{4}$ N.; distance 16 miles. There is no passage for vessels between Baker's Island and Little Cranberry Island.

Bear Island Lighthouse.

About 4 miles Northwesterly from Baker's Island Lighthouse, upon the Southwest part of Bear Island, North side of entrance to Southwest Harbor, is a Lighthouse which shows a fixed White Light. This Light is also a guide to Northeast Harbor. A Fog Bell is placed near this Lighthouse.

Remarks.

Southwest Harbor is more than a mile in length in an E. SE. and W. NW. direction, with an average width of about $\frac{1}{2}$ mile. The holding-ground is excellent, the shelter good, and about 7 fathoms water can be carried into it at Low Tide, thus affording anchorage for the heaviest-draught vessels. There are three passages into

Distance.

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this harbor. First, the Western, which leads in between Great Cranberry Island and Mount Desert. The entrance to this channel is about 4 miles West from Baker's Island Lighthouse, and has a depth of about 14 feet water in it at Low Tide. Second, the one North of Baker's Island, between Sutton's and Great and Little Cranberry Islands, which has a depth of 4 fathoms water; and lastly, the Main Ship Channel, which is about 1¾ miles North of Baker's Island. This last channel is between Bunker's Ledge and Bear Island Lighthouse on the North, and Sutton's Island on the South.

Western Passage.

Sailing Directions to enter Southwest Harbor by the Western Passage, in Daytime, with favorable winds and fair weather.

From the Westward, leave Matinicus Rock Lighthouses about 2 or 3 miles on the Port hand, and steer **NE.** by **E.** ½ **E.** If this course is made good, all the Islands and Ledges will be left well on the Port hand. As soon as Baker's Island Lighthouse is made, bring it to bear **NE.** ¾ **N.**, and run for it on this course until the Lighthouse at Bass Harbor bears **NW.** (Baker's Island Lighthouse will then be distant 4 miles); then steer **N.NW.**, keeping a sharp lookout for Long and South Bunker's Ledges. The former extends off about ½ mile from the Mount Desert shore, and is marked on its outer part with a Black Buoy, No. 3.* The latter is marked with a Red Spindle. Baker's Island Lighthouse bears from it **E.** ¼ **S.**; distance 3¾ miles. The Black Buoy No. 1, off Long Ledge, bears from this Spindle West; distance ¾ mile. The channel is between this Spindle and Buoy. When the Buoy and Spindle are made, pass in between them, giving the latter a berth of at least 250 yards, leaving it on the Starboard, and steer about **NE.** by **N.** As you sail in, you will see about ¾ mile to the Northeastward of the Spindle two Buoys, one Black, the other Red. The Black Buoy, No. 5, lies off the Eastern part of Flynn's Ledge, which has 5 feet water upon it at Low Tide. The Red Buoy, No. 2, lies off the Southwest part of Cranberry Island Ledge, which has but 4 feet water upon it at Low Tide. The channel, which is between these two Buoys, is 275 yards wide, and has a depth of 3½ fathoms water. Pass in between these two last-named Buoys, leaving the Black one about 50 yards on the Port,

* The outer part of Long Ledge at this date (1882) is marked with an Automatic Bell Buoy.

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and steer about **N.** by **E.**, keeping in about mid-channel, and crossing Cranberry Island Bar in about 14 feet water at Low Tide. After passing this Bar, continue the course **N.** by **E.** for about $1\frac{1}{4}$ miles, leaving the Red Buoy off Cow Ledge on the Starboard hand. When the Southwest Harbor is open, bearing about **W.NW.**, then run in about midway, leaving the Red Buoy off Greening's Ledge on the Starboard hand, and anchor near the Head of the harbor in from $3\frac{1}{2}$ to 6 fathoms water. At Night-time strangers should not attempt to enter Southwest Harbor by this channel.

Coming from the Westward, through Eggemoggin Reach or Deer Island Thoroughfare, bound to Southwest Harbor by the Western channel, follow the directions before given for those passages until past Bass Harbor Bar, then bring the Lighthouse at Bass Harbor Head to bear **W.** by **N.** $\frac{1}{2}$ **N.**, and steer **E.** by **S.** $\frac{1}{2}$ **S.** until the Black Buoy off Long Ledge and the Red Spindle on South Bunker's Ledge are both made; then follow the directions before given.

Sailing Directions to enter Southwest Harbor by Ship Channel, in Daytime, with favorable winds and fair weather.

From the Westward, follow the directions before given for the Western passage until Baker's Island Lighthouse is made; then leave it about 1 mile on the Port hand, and when it bears West steer **NW.** by **N.** $\frac{3}{4}$ **N.**, leaving the Black Buoy No. 1, off the Eastern part of Harding's Ledge (which extends off from Little Cranberry Island), on the Port hand. Continue the course **NW.** by **N.** $\frac{3}{4}$ **N.** until Bear Island Lighthouse (East side of entrance to Northeast Harbor) bears **NW.** by **W.** $\frac{1}{2}$ **W.**; then steer for it on this course. The Monument on East Bunker's Ledge, and the Red Buoys on Bowden's Ledge and Long Point Ledge, will all be left well on the Starboard hand; and Sutton's Island on the Port hand. When abreast the Northeast part of this last-named Island, or about 1 mile from Bear Island Lighthouse, haul up about **W.** by **N.**, passing about midway between the Western part of Sutton's Island and the Lighthouse. Continue the course **W.** by **N.** until the last-named Lighthouse bears **E.NE.**; then steer **W.SW.**, leaving the Southeast part of Greening's Island about $\frac{1}{4}$ mile on the Starboard hand. When Southwest Harbor opens, bearing about **W.NW.**, run in and anchor as before directed.

Beating into Southwest Harbor by way of Ship Channel.

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At Night or Day, in beating into this Harbor, the shores are bold, and the principal dangers to be avoided are Harding's Ledge, East Bunker's Ledge, and Long Point Ledge. The first-named danger extends off about East $\frac{1}{4}$ mile from the Southeast part of Little Cranberry Island, and is marked off its Eastern part with a Black Buoy, No. 1. Baker's Island Light bears from this Buoy about South; distance $1\frac{1}{4}$ miles. The second danger is East Bunker's Ledge, which is marked with a White square stone Beacon. Bear Island Light bears from this Beacon about W.NW.; distance 2 miles. In beating in Ship Channel, this last-named Ledge, which is quite bold, may be approached upon its Southern side within 250 yards; but vessels passing North of it should give the Monument a berth of at least $\frac{1}{2}$ mile. The third and last danger is Long Point Ledge, which has 5 feet water upon it at Low Tide, and is marked off its Southern part with a Red Buoy, No. 4. Bear Island Lighthouse bears from this Buoy W. by N. $\frac{1}{2}$ N., $\frac{5}{8}$ mile. In beating in at Night, in order to avoid this Ledge, Bear Island Light should not bear to the Westward of W.NW. Greening's Ledge, which has but little water upon it at Low Tide, lies off about $\frac{1}{4}$ mile from Greening's Island, which is on the North side of Southwest Harbor. In order to avoid this Ledge, in going in, keep the Southern shore of the harbor best aboard. In beating in, the Southern side may be approached by vessels of 14 feet draught within 200 yards without danger.

At Night or Day, coming from the Eastward or Westward, and intending to beat into Southwest Harbor, when Baker's Island Light bears S. by W., bring Bear Island Light to bear NW. by W. $\frac{1}{2}$ W.; then keep a sharp lookout to avoid the shores, and likewise the dangers I have described, and you will work safely into Southwest Harbor.

Sailing Directions for Southwest Harbor, by way of Ship Channel, at Night-time, with favorable winds and fair weather.

From the Eastward or Westward, when Baker's Island Light bears SW., bring Bear Island Light to bear NW. by W. $\frac{1}{2}$ W. If there is no error in the compass, this last course will take you

nearly in mid-channel. When Baker's Island Light is shut in behind Little Cranberry Island, or bears **S.** by **E.** $\frac{1}{4}$ **E.**, you are then past East Bunker's Ledge. Continue the course **NW.** by **W.** $\frac{1}{2}$ **W.** for the Light until you judge you are from $\frac{3}{4}$ to 1 mile from it; then haul up **W.** by **N.**, passing about midway between Bear Island Light and Sutton's Island. The channel between the last-mentioned Island and Light is about $\frac{1}{2}$ mile wide. When Bear Island Light bears **E.** by **N.** $\frac{3}{4}$ **N.**, steer **W.** by **S.** $\frac{3}{4}$ **S.**, keeping a sharp lookout for the Southeast point of Greening's Island, which is left on the Starboard hand. When past this point, haul up about **W.** by **N.** into the harbor, and anchor in from $3\frac{1}{2}$ to 10 fathoms water. The Southern shore of Southwest Harbor is bold; in order, therefore, to avoid Greening's Ledge at Night, keep this side best aboard.

If you do not think proper to attempt to enter Southwest Harbor at Night, when Bear Island Light bears **E.NE.**, you may anchor in from 10 to 12 fathoms water and wait until daylight. This last anchorage is exposed to winds from East to Southeast.

High Water.

It is High Water in Southwest Harbor, Mount Desert, 28 minutes before it is at Boston. Common tides rise about 10 feet.

Northeast Harbor (Mount Desert).

This Harbor lies about 5 miles Northwesterly from Baker's Island Lighthouse, and about $1\frac{1}{2}$ miles Northeasterly from Southwest Harbor. Upon Bear Island, Eastern side of entrance to this harbor, is a Lighthouse (before described).

Remarks.

This Harbor, which is narrow, is about $\frac{3}{4}$ mile in length, and has good anchorage, and also good holding-ground, in from 2 to $3\frac{1}{4}$ fathoms water at Low Tide.

Sailing Directions for Northeast Harbor in Day-time, with favorable winds and fair weather.

Coming from the Westward outside of all dangers, or through Eggemoggin Reach, or Deer Island Thoroughfare, follow the direc-

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tions before given for the Western passage into Southwest Harbor until past Cranberry Island Bar and abreast the Northwest part of Great Cranberry Island; then steer N.NE. $1\frac{1}{2}$ miles, leaving the Lighthouse on Bear Island about $\frac{1}{3}$ mile on the Starboard hand. As you sail in, you will see, about $\frac{1}{3}$ mile Northwest from it, the Red Buoy which lies off the Northwest part of Northeast Harbor Ledge (which is bare at Low Tide). Leave this Buoy about 50 yards on the Starboard hand, and steer in about North, keeping midway of the harbor, and anchor about $\frac{1}{2}$ mile North from the Buoy in about $3\frac{1}{4}$ fathoms at Low Tide. Above this, or about $\frac{1}{3}$ mile from the head of the harbor, the water is shoal.

By Ship Channel.

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Entering Northeast Harbor by this Channel, follow the directions before given for Southwest Harbor until Bear Island Lighthouse bears E.NE., when you will see, about $\frac{1}{3}$ mile to the Northwest of it, the Red Buoy off the Northwest part of Northeast Harbor Ledge. Leave this Buoy about 50 yards on the Starboard hand, and proceed as before directed.

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Southeast Rock off Petit Menan.

This Rock, which has but 7 feet water upon it at Low Tide, is marked with a Buoy (painted in Red and Black Horizontal stripes) which lies about 100 feet Southwest from it. From this Buoy, Petit Menan Lighthouse bears ~~N. by W.~~ about 4 miles.

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Vessels from the Eastward, bound to either Northeast or Southwest Harbors, may leave the Buoy on this last-mentioned Rock about $\frac{1}{8}$ mile on the Starboard hand, and steer W. $\frac{1}{4}$ N. for Baker's Island Lighthouse; distance 17 miles. When about 4 miles from it, haul in W.NW., and when the Beacon upon East Bunker's Ledge is made, bring it to bear W.NW., and run for it, leaving it $\frac{1}{4}$ mile upon the Starboard hand, and follow the directions before given.

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Beating into Northeast Harbor by way of Ship Channel.

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At Night or Day, beating into this Harbor, follow the directions before given for beating into Southwest Harbor by Ship Channel

until past Bear Island Light; then keep the Western shore of the harbor (which is bold after the Lighthouse bears **SE.** by **E.**) best aboard, taking care to avoid Northeast Harbor Ledge, which is marked off its Northwest part with a Red Buoy. Bear Island Lighthouse bears from this Buoy **SE.** $\frac{1}{2}$ **E.**; distance $\frac{1}{4}$ mile. At Night, after passing this Buoy, or the Light bears **SE.** by **S.**, distance about $\frac{1}{2}$ mile, anchor in from $5\frac{1}{2}$ to $6\frac{1}{2}$ fathoms water.

Sailing Directions for Northeast Harbor at Night-time, with favorable winds and fair weather.

From the Eastward or Westward, run in according to directions before given for Southwest Harbor, by way of Ship Channel, until Bear Island Light bears North; then, in order to avoid Northeast Harbor Ledge, haul to the Northeastward around the Light, leaving it not more than 250 yards on the Starboard. When it bears **SE.** by **S.** $\frac{1}{2}$ **S.**, steer **NW.** by **N.** $\frac{1}{2}$ **N.**, and anchor at the mouth of the harbor in from $5\frac{1}{2}$ to 7 fathoms water. Northeast Harbor Ledge, which is bare at Low Tide, lies **NW.** 500 yards from the Lighthouse; the Red Buoy is placed about 80 feet **W.NW.** from its Western part. There is another Ledge on the Eastern side of the harbor which has 4 feet water upon it. This last Ledge bears **N.** by **W.** from Bear Island Light; distance 750 yards.

High Water.

For time of High Water in Northeast Harbor, see directions for Southwest Harbor.

Cranberry Island, or Hadlock's Harbor.

This Harbor, which has from 2 to 4 fathoms water in it, lies between Great and Little Cranberry Islands. Its entrance is about **E.SE.** $2\frac{1}{2}$ miles from Southwest Harbor, and $1\frac{1}{2}$ miles South from Bear Island Lighthouse.

Sailing Directions for Cranberry Island Harbor in Daytime, with favorable winds and fair weather.

From the Westward, follow the directions before given for Southwest Harbor, by way of the Western passage, until past Cranberry Island Bar and the Red Buoy off Cow Ledge; then haul to the Northeastward around the Northwest part of Great Cranberry Island, leaving it about $\frac{1}{4}$ mile on the Starboard hand, and steer about East. As you pass in, you will see the Red Buoy which lies off the Northern part of Sperlin Rock. Leave this Buoy a short distance upon the Starboard hand, and run in **S.SE.** about $\frac{1}{2}$ mile, and anchor abreast Long Point, in about 3 fathoms water at Low Tide, which will be nearly $5\frac{3}{4}$ fathoms at High Tide.

From the Eastward or Westward, bound into this Harbor, follow the directions before given for Southwest Harbor, by way of Ship Channel in daytime, until the Monument upon East Bunker's Ledge bears **E.NE.**; then steer **W.SW.** until the harbor is fairly open; then run in about midway, and anchor as before directed. In beating in, after passing the Red Buoy No. 2, off Sperlin Rock, use the lead, and do not approach either shore at Low Tide in less than 3 fathoms water. It is not advisable for vessels of more than 14 feet draught to attempt to enter this harbor, as there are several shoal spots of 15 feet in it, some of which lie nearly midway the entrance.

Upon the Western side of Cranberry Island Harbor is a shallow Cove called The Pool. Only 2 feet water can be taken into it at Low Tide, and vessels that enter it at High Water must lie aground when the Tide falls.

High Water.

For time of High Water in Cranberry Island Harbor, see directions for South-West Harbor.

Somes, or Somesville, Harbor.

This Harbor is situated near the Head of Somes Sound, and bears **N. $\frac{1}{2}$ E.** about $5\frac{1}{2}$ miles from South-West Harbor. About 3 fathoms water can be carried at Low Tide up the Sound abreast the village, but in order to reach it vessels must wait until High Water. In sailing through this Sound from Bear Island Lighthouse there are but few obstructions to Navigation, but it is advisable for

strangers to take a pilot either at North-East or South-West Harbors, as the sudden gusts and heavy flaws of wind from the Mountain are apt to capsize or carry a vessel ashore.

Bar Harbor (Mount Desert).

This Harbor, which is formed by the Northeastern shore of Mount Desert, and Harbor, and Porcupine Islands, is on the Western side of Frenchman's Bay, about $9\frac{1}{2}$ miles Northeasterly from Baker's Island Lighthouse, and about 4 miles from the Red Light upon Egg Rock.

Remarks.

In approaching and entering this Harbor there are but few dangers to be avoided. With Westerly and Northerly winds there is good anchorage off the Wharf in from 4 to 5 fathoms water, with good holding-ground; but the harbor is exposed to gales from E.N.E. to S. by E. by way of East. This place has recently become famous as a watering-place, but it is said to be rarely used by coasters as a harbor of refuge.

Sailing Directions for Bar Harbor in Daytime, with favorable winds and fair weather.

From the Westward, give Baker's Island Lighthouse a berth of about one mile, leaving it on the Port hand. When it bears W. NW., steer about N.NE., giving the Eastern shore of Mount Desert Island a good berth. As you sail in you will see a remarkable bare perpendicular Bluff, a part of which at a distance appears like a Schooner with her three lower sails set; this is called Schooner Head. When abreast this Head there will be seen to the Northward, lying near the shore, a small Island which is bold, and farther in the Porcupine Islands. The first, which lies about $\frac{1}{2}$ mile from the Western shore, is high, and has a peculiar White spot on its South side; this is called Round Porcupine. As you approach this last-mentioned Island, you will see a short distance to the Westward of it a dry Ledge; pass in about midway between this Ledge and the Western shore, taking care not to approach the latter nearer than 400 yards. When the end of the long Wharf

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If you are bound to Bar Harbor, and wish to pass to the Northward, or inside of the Cranberry Islands, follow the directions before given for entering the Southwest Harbor by the Western passage until past Cranberry Island Bar and the Red Buoy No. 4, off Cow Ledge. When abreast the latter, steer N. by E. $\frac{1}{2}$ E. until Bear Island Light bears NE.; then run for it, passing between Greening's and Sutton's Islands. Continue the course for the Lighthouse until about $\frac{1}{4}$ mile from it; then steer E. $\frac{1}{2}$ S., leaving the Red Buoys off Long Point and Bowden's Ledges well on the Port hand, and the Monument on East Bunker's Ledge, and the Black Buoy off the Northeast part of Lewis Rock, both on the Starboard hand; the latter lies about 400 yards to the Northward of the Monument. After passing the Monument and Buoy, it is only necessary to give Mount Desert Island a good berth, and follow the directions before given.

From the Eastward, give the Lighthouse upon Egg Rock a berth of about a mile, leaving it on the Starboard hand, and steer NW. by N. until you make the Southern Porcupine Island (before described). Bring this Island to bear NW., and run for it, leaving it about 200 yards on the Port hand, and haul in about W.NW., and anchor in about 5 fathoms water at Low Tide, with the end of the long Wharf bearing West.

Bar Harbor bears from the Lighthouse upon Egg Rock about NW. $\frac{1}{2}$ N.; distance about 4 miles.

In beating into this harbor between the Porcupine Islands there are no dangers, and vessels may stand to the Northwestward, after they have passed these Islands, until the end of the Wharf bears SW. by W.; it is then necessary to tack ship, as there is a Shoal Bar which extends from the largest Island to the Western shore.

High Water.

It is High Water in Bar Harbor 32 minutes before it is at Boston. Common Tides rise about $10\frac{1}{2}$ feet.

Egg Rock Lighthouse (Frenchman's Bay).

Upon this Rock is a Lighthouse which shows a Red Fixed Light. At this date (1879) a Fog Bell is placed near it, which is struck

by hand in thick weather. This Lighthouse is nearly in the middle of the Bay, and is not only a guide to Frenchman's Bay, but also to Winter Harbor. Baker's Island Lighthouse bears from Egg Rock Lighthouse **SW.** by **S.** $\frac{1}{4}$ **S.**; distance about $7\frac{1}{2}$ miles.

Winter (or Mosquito) Harbor.

The entrance to this Harbor bears about **NE.**, distance $9\frac{1}{4}$ miles from Baker's Island Lighthouse; and **SE.** by **E.** $\frac{1}{2}$ **E.**, $2\frac{1}{4}$ miles from Egg Rock Lighthouse.

Mark Island Lighthouse.

Upon the South point of Mark Island, West side of entrance to this harbor, is a Lighthouse which shows a fixed White Light.

Sailing Directions for Winter Harbor in Daytime, with favorable winds and fair weather.

From the Westward,* after passing Baker's Island, bring the Lighthouse to bear **SW.** by **S.** $\frac{1}{4}$ **S.**, and steer **NE.** by **N.** $\frac{1}{4}$ **N.** for Egg Rock Lighthouse; distance $7\frac{1}{2}$ miles. As soon as this Lighthouse is made, keep it on the Port bow, and leave it about $\frac{1}{2}$ mile on the Port hand. When it bears North, steer **E.** by **S.**, leaving the Southern part of Turtle Island, which is bold, about $\frac{1}{4}$ mile on the Port. After passing this point, Winter Harbor Sound will open, and you will see Mark Island Lighthouse, which in entering the Sound is left on the Port hand. Continue the course **E.** by **S.** until this Lighthouse bears **N.** by **E.**; then run in about midway between it and the Eastern shore. When abreast the Lighthouse, steer **N.** by **E.** $\frac{1}{2}$ **E.** As you sail in you will see, $\frac{1}{2}$ mile to the Northward of it, a Black Spindle with Cage on top, which is on Grindstone Ledge; pass about midway between this Spindle and the Eastern shore, and continue the course **N.** by **E.** $\frac{1}{2}$ **E.** about $\frac{3}{4}$ mile, when you will see Winter Harbor Point, which is left on the Port hand. On the Starboard will be seen the Red Buoy off the Northwest part of Abijah's Ledge; leave this Buoy about 100 yards on the Starboard, and when it bears **SE.** $\frac{1}{2}$ **S.**, haul up

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NW. $\frac{1}{2}$ N. into the harbor, leaving the Red Buoy off the South part of Guptill's Ledge on the Starboard hand. When about 100 yards past this last-named Buoy, anchor in about $2\frac{1}{2}$ fathoms water at Low Tide. Farther up the water is shoal.

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Petit Menan Lighthouse bears from the Buoy painted in Red and Black Horizontal stripes, off the Southern part of Southeast Rock, **N. by W.**; distance about 4 miles. Vessels therefore, coming from the Eastward, may leave this Buoy about $\frac{1}{4}$ mile on the Starboard hand, and steer **W. by N. $\frac{1}{4}$ N.** 9 miles, when Winter Harbor Sound will open; on this course Schoodiac Island and Point will be left well on the Starboard hand. When the Lighthouse on Mark Island bears **N. $\frac{1}{2}$ E.**, run for it on this course, leaving it on the Port hand, and follow the directions before given.

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In beating into this Harbor the shores are bold, and may be approached within 200 yards without danger. The principal obstructions are Grindstone, Abijah's, and Guptill's Ledges. The first-named (Grindstone Ledge), which lies upon the Western side of the Channel, is marked with a Black Spindle which bears from Mark Island Lighthouse **N. by E. $\frac{1}{2}$ E.**, distance $\frac{1}{2}$ mile; the second (Abijah's Ledge), which lies on the East side of the Channel, at the entrance of the harbor, is marked on its Northwestern side with a Red Buoy No. 2, which bears from Mark Island Lighthouse **NE. by N. $\frac{1}{2}$ N.**, distance $1\frac{1}{2}$ miles; and lastly, Guptill's Ledge, which lies on the Northern side of the harbor, and is marked off its South part with a Red Buoy No. 4, which bears **NW. by N. $\frac{1}{4}$ mile** from the Red Buoy off Abijah's Ledge. In beating in at night or day, bring the Light to bear from **N.NE. to N.** At night, after passing it, in order to avoid Grindstone Ledge, keep the Eastern shore t aboard until you judge you are past it; then keep the Western shore best aboard, and anchor in Sand Cove in from 5 to 8 fathoms water. This Cove is on the Western side of Winter Harbor Sound, about $1\frac{1}{2}$ miles above the Light.

Sand Cove Harbor.

Strangers should not attempt to enter Winter Harbor at night, but may by the following directions run safely into this Cove. This fine harbor, which lies on the Western side of Winter Harbor Sound, is a large commodious Cove, easy of access to the heaviest-draught vessels. The holding-ground is good, the depth of water about $5\frac{1}{2}$ fathoms, and there are no dangers in it. After passing the Light, the only danger to be avoided is Grindstone Ledge, which lies $\frac{3}{8}$ mile from the Southeast point of Grindstone Island, and is marked with a Black Spindle with a large Cage on top. This Spindle bears N. by E. $\frac{1}{2}$ E. from the Lighthouse; distance $\frac{1}{2}$ mile.

Sailing Directions for Sand Cove Harbor, in Night-time, with favorable winds and fair weather.

Coming from the Eastward or Westward, bring Winter Harbor Light to bear from N.NE. to N. by E., and run for it. As you approach the Light, haul gradually to the Eastward, leaving it about 300 yards on the Port hand. When abreast it, steer N. by E. $\frac{1}{2}$ E., and if the night is very dark, use the Lead, and do not go into less than 10 fathoms water until past the Spindle on Grindstone Ledge. When you judge you are about a mile past the Light, haul up N. by W., run $\frac{1}{2}$ mile, and anchor in the Cove in from $5\frac{1}{2}$ to 7 fathoms water. After passing Grindstone Ledge there are no obstructions, and the shores may be approached within 100 yards without danger.

High Water.

It is High Water in Winter Harbor 37 minutes before it is at Boston. Common Tides rise about $10\frac{1}{2}$ feet.

Mosquito Harbor.

This small shallow Cove, which is only fit for small vessels to enter, lies on the Eastern shore of Winter Harbor Sound. Its entrance bears NE. $\frac{1}{2}$ N. from Winter Harbor Lighthouse; distance about 1 mile.

Sailing Directions for Mosquito Harbor in Daytime.

Coming from the Eastward or Westward, follow the directions before given for Winter Harbor in daytime until abreast the Light-house; then steer **NE.** by **N.** $\frac{1}{2}$ **N.** a little more than a mile, when the Harbor will be fairly open, bearing **S.SE.**; then run in about midway, and anchor when the water shoals to 2 fathoms at Low Tide, which will be about $3\frac{3}{4}$ fathoms at High Tide.

High Water.

It is High Water in Mosquito Harbor about the same time it is at Winter Harbor.

Prospect Harbor.

The entrance to this Harbor is East Northerly about 12 miles from Baker's Island Lighthouse, and West Northerly about 5 miles from Petit Menan Lighthouse.

Prospect Harbor Lighthouse.

Upon Prospect Point, East side of entrance to this Harbor, is a Lighthouse which shows a Flashing Red and White Light. This Lighthouse bears from Baker's Island Lighthouse **NE.** by **E.** $\frac{3}{4}$ **E.**, distance 13 miles; from Petit Menan Lighthouse, **NW.** by **W.** $\frac{3}{4}$ **W.**, distance 5 miles.

Sailing Directions for Prospect Harbor in Daytime, with favorable winds and fair weather.

From the Westward, after passing Baker's Island, bring the Lighthouse to bear **W.** by **S.**, on which bearing keep it, and steer **E.** by **N.** 9 miles, when you will be abreast Schoodic Island. Continue the course **E.** by **N.** until the Lighthouse at Prospect Harbor bears **N.** by **E.**; then run for it on this course, leaving the Black Buoy off the Eastern part of Harbor Ledge on the Port, and the Red Buoy off the Western part of Prospect Harbor Ledge on the Starboard hand. Continue the course for the Lighthouse until about

400 yards from it; then steer **NW. by W. $\frac{3}{4}$ W.**, leaving the Black Spindle, with wheel and pendant on top, on the Port hand. When the Lighthouse bears **E. $\frac{1}{2}$ N.**, anchor in the Inner Harbor in from 3 to 5 fathoms water. Above this, the water is shoal.

N. by N. Petit Menan Lighthouse bears from the Buoy off Southeast Rock ~~N. by W.~~; distance 4 miles. Vessels from the Eastward may leave this Buoy $\frac{1}{2}$ mile on the Starboard hand and steer **W. by N. $\frac{1}{2}$ N.** until Prospect Harbor Lighthouse (which is on the keeper's dwelling) bears **N. by E.**; then run in as before directed.

There is a Ledge which makes off to the Southwestward about 250 yards from the Lighthouse Point, and at this date (1879) is not Buoyed. Vessels in running in **N. by E.** for the Lighthouse should not, therefore, approach it nearer than 400 yards.

High Water.

It is High Water in Prospect Harbor 32 minutes before it is at Boston, Common tides rise about $10\frac{3}{4}$ feet.

Petit Menan Lighthouse.

Upon the Southern part of a small Rocky Islet called Petit Menan a lofty Tower has been erected, which shows a Fixed Light varied by Flashes.

Fog Signal.

Near this Lighthouse is a Steam Whistle, which at this date (1879) gives two blasts of 5 seconds each per minute, with intervals between the blasts of 8 seconds and 42 seconds.

Bearings and Distances of Lighthouses from Petit Menan Lighthouse.

	Distance.
Mt. Desert Rock Lighthouse, . . SW. $\frac{1}{4}$ S. , . .	27 miles.
Baker's Island Lighthouse, . . W. by S. $\frac{1}{4}$ S. , . .	16 $\frac{1}{2}$ "
Nash's Island Lighthouse, . . . NE. by E. , . .	7 $\frac{1}{2}$ "
Machias Seal Island Lighthouses, E. $\frac{1}{4}$ S. , . .	34 "
Bryer's Island Lighthouse, entrance to St. Mary's Bay, . . E. SE. , . . .	64 "

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Petit Menan

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Petit Menan Island is surrounded by dangerous Ledges, Rocks, and Shoals, some of which are more than 4 miles from it. On its North side lie the two shoals known as Inner and Outer Bars. On its East, West, South, and Southeastern are several dangerous Rocks, most of which are at this time Buoyed.

Bearings and Distances of Dangers.

Moulton's Ledge.

This Ledge, which is bare at Low Tide, extends in a NE. and SW. direction about 100 yards, and is marked off its Southwest part with a Buoy painted in Red and Black Horizontal stripes. Petit Menan Lighthouse bears from this Buoy E. by S. about 2 miles.

Petit Menan Reef.

This Reef extends off from the Southern part of Petit Menan Island, and is marked off its Southern part with a Red Buoy, No. 4. Petit Menan Lighthouse bears from this Buoy N. ¾ E. about ½ mile.

Simm's Rock.

This dangerous Ledge, which has but 6 feet water upon it at Low Tide, is marked off its Southern part with a Buoy painted in Red and Black Horizontal stripes. Petit Menan Lighthouse bears from this Buoy N. ½ W. about 2 miles. The channel between Simm's Rock and the Buoy off Petit Menan Reef is a little more than a mile wide, and has not less than 5 fathoms water in it.

ELDRIDGE'S COAST PILOT, No. 1.

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Southeast Rock.

Petit Menan Lighthouse bears from the Buoy off Southeast Rock N. W. by N. ¼ N.

This Ledge, which extends off about S. by E. over a mile from the Island called Jordan's Delight, is marked upon its Southern part with a Red Buoy No. 2. Petit Menan Lighthouse bears from this Buoy SW. ¾ S., distance 3 miles; Nash's Island Lighthouse, E. by N. ½ N., distance 5 miles. Vessels running from Petit Menan

400 yards from it; then steer NW. by W. $\frac{3}{4}$ W., leaving the Black Spindle, with wheel and pendant on top, on the Port hand. When the Lighthouse bears E. $\frac{1}{2}$ N., anchor in the Inner Harbor in from 3 to 5 fathoms water. Above this, the water is shoal.

N. by N. Petit Menan Lighthouse bears from the Buoy off Southeast Rock ~~N. by W.~~; distance 4 miles. Vessels from the Eastward may leave this Buoy $\frac{1}{2}$ mile on the Starboard hand and steer W. by N. $\frac{1}{2}$ N. until Prospect Harbor Lighthouse (which is on the keeper's dwelling) bears N. by E.; then run in as before directed.

There is a Ledge which makes off to the Southwestward about 250 yards from the Lighthouse Point, and at this date (1879) is not Buoyed. Vessels in running in N. by E. for the Lighthouse should not, therefore, approach it nearer than 400 yards.

High Water.

It is High Water in Prospect Harbor 32 minutes before it is at Boston. Common tides rise about $10\frac{3}{4}$ feet.

Petit Menan Lighthouse.

Upon the Southern part of a small Rocky Islet called Petit Menan a lofty Tower has been erected, which shows a Fixed Light varied by Flashes.

Baker's Island Lighthouse, . .	W. by S. $\frac{1}{4}$ S.,	16 $\frac{1}{2}$	"
Nash's Island Lighthouse, . . .	NE. by E., . .	7 $\frac{1}{2}$	"
Machias Seal Island Lighthouses,	E. $\frac{1}{4}$ S., . .	34	"
Bryer's Island Lighthouse, entrance to St. Mary's Bay, . .	E. SE., . . .	64	"

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Petit Menan Island is surrounded by dangerous Ledges, Rocks, and Shoals, some of which are more than 4 miles from it. On its North side lie the two shoals known as Inner and Outer Bars. On its East, West, South, and Southeastern are several dangerous Rocks, most of which are at this time Buoyed.

Bearings and Distances of Dangers.

Moulton's Ledge.

This Ledge, which is bare at Low Tide, extends in a NE. and SW. direction about 100 yards, and is marked off its Southwest part with a Buoy painted in Red and Black Horizontal stripes. Petit Menan Lighthouse bears from this Buoy E. by S. about 2 miles.

Petit Menan Reef.

This Reef extends off from the Southern part of Petit Menan Island, and is marked off its Southern part with a Red Buoy, No. 4. Petit Menan Lighthouse bears from this Buoy N. $\frac{3}{4}$ E. about $\frac{1}{2}$ mile.

Simm's Rock.

This dangerous Ledge, which has but 6 feet water upon it at Low Tide, is marked off its Southern part with a Buoy painted in Red and Black Horizontal stripes. Petit Menan Lighthouse bears from this Buoy N. $\frac{1}{2}$ W. about 2 miles. The channel between Simm's Rock and the Buoy off Petit Menan Reef is a little more than a mile wide, and has not less than 5 fathoms water in it.

Southeast Rock.

This Ledge, which has but 6 feet water upon it at very Low Tides, is the outermost danger to the Southward of Petit Menan; it is marked off its Southwest part with a Buoy painted in Red and Black Horizontal stripes. Petit Menan Lighthouse bears from this Buoy ~~N. by W.~~; distance about 4 miles.

Jordan's Delight Ledge.

This Ledge, which extends off about S. by E. over a mile from the Island called Jordan's Delight, is marked upon its Southern part with a Red Buoy No. 2. Petit Menan Lighthouse bears from this Buoy SW. $\frac{3}{4}$ S., distance 3 miles; Nash's Island Lighthouse, E. by N. $\frac{1}{2}$ N., distance 5 miles. Vessels running from Petit Menan

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7 $\frac{1}{2}$ "
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64 "

to Nash's Island should not go to the Northward of this Buoy, as there are many dangerous Rocks lying between it and the Island called Jordan's Delight.

Jackson's Ledge.

This dangerous Ledge, which at this date (1879) is not Buoyed, has but 9 feet water upon it at very Low Tides. Petit Menan Lighthouse bears from it **W. $\frac{3}{4}$ S.**; distance about 4 miles.

Petit Menan Channel.

In Daytime, vessels from the Westward, especially with strong Northerly winds, may bring Petit Menan Lighthouse to bear **NE.** by **E.**, and run for it on this course. As they approach this Lighthouse it is necessary to keep a sharp lookout for the large Red Buoy off Petit Menan Reef. The Lighthouse bears from this Buoy **N. $\frac{3}{4}$ E.**; distance about $\frac{1}{2}$ mile. Leave this Buoy about $\frac{1}{4}$ mile on the Port, and in order to clear Jackson's Ledge, make good the course **E. SE.** From the Eastward, as soon as Petit Menan Lighthouse is made, in order to clear Jackson's Ledge, bring it to bear **W. NW.**, and run for it on this course, leaving the Red Buoy off Petit Menan Reef on the Starboard hand. After passing this, make good the course **SW.** by **W.** The channel between Petit Menan Reef and Simm's Rock is about $1\frac{1}{4}$ miles in width, and has a depth of not less than 5 fathoms water at Low Tide. Strangers should not attempt this channel at Night, and in passing Petit Menan Light at that time should keep at least 6 miles to the Southward of it.

Gouldsborough Bay and Harbor.

A little more than 2 miles to the Eastward of Prospect Point Lighthouse, and **NW. $\frac{1}{2}$ N.** about 4 miles from Petit Menan Lighthouse, is the entrance to Gouldsborough Bay. This Bay, which makes in nearly North and South, has an average width of about $1\frac{1}{4}$ miles to the Narrows, which is 5 miles above its mouth; between the Narrows and Steuben the water is shoal. At the entrance of this Bay there are several small Islands; the channel, which is about $\frac{1}{4}$ mile wide, leads in to the Westward of the Eastern-

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most Island. This Island lies just to the Westward of Dyer's Point, and is bare except in the middle, where there is, at this time, a small grove of bushes. The next Island to the Westward of this last named has no trees upon it, and is covered with moss and grass.

Sailing Directions for Gouldsborough Bay and Harbor in Daytime, with favorable winds and fair weather.

From the Westward, after passing Schoodic Point and Island, bring Petit Menan Lighthouse to bear **NE.** by **E.**, and run for it on this course until you make the Buoy painted in Red and Black Horizontal stripes, off the Southwest part of Moulton's Ledge. Petit Menan Lighthouse bears from this Buoy **E.** by **S.**; distance about 2 miles. Leave the Buoy about $\frac{1}{4}$ mile on the Starboard hand, and steer **N.** by **E.** until the passage between the two Eastern Islands at the entrance of Gouldsborough Bay is fairly open, bearing **N.** $\frac{1}{2}$ **W.**; then run in midway between them. When past these Islands, steer **N.NW.** about $\frac{3}{4}$ mile, when you will be abreast of Ward's Cove, which is on the Western side of the Bay. From this Cove steer about **N.** $\frac{1}{2}$ **E.** 4 miles, and anchor between Garden and Roger's Points, at the mouth of the Narrows, in from 3 to 4 fathoms water at Low Tide, with good holding-ground. If you wish to go above the Narrows, a pilot will be necessary. From the Eastward, bring Petit Menan Lighthouse to bear **W.NW.**, and run for it, leaving Jackson's Ledge well on the Starboard hand. As you approach Petit Menan Lighthouse, keep a sharp lookout for the large Red Bouy off Petit Menan Reef. Petit Menan Lighthouse bears from this Buoy **N.** $\frac{3}{4}$ **E.**; distance a little more than $\frac{1}{2}$ mile. Leave this last-mentioned Buoy about $\frac{1}{4}$ mile on the Starboard hand, and steer **W.NW.** until the last-named Lighthouse bears **NE.** by **E.** $\frac{1}{2}$ **E.** about 1 mile; then run **N.NW.** until you make the passage between the two Eastern Islands at the mouth of Gouldsborough Bay. When this passage is fairly open, bearing **N.** $\frac{1}{2}$ **W.**, then run in, and proceed as before directed.

High Water.

It is High Water in Gouldsborough Bay about the same time that it is at Prospect Harbor.

Dyer's Bay.

The next opening, which is about 1 mile to the Eastward of Gouldsborough Bay, is the entrance to Dyer's Bay. Petit Menan Point, which lies on the East side of this entrance, is low, and there extends off from it at Low Tide a long Ledge. This last-named Point bears from Petit Menan Lighthouse **NW.** by **N.** $\frac{3}{4}$ **N.**; distance about $2\frac{1}{2}$ miles. On the West side of entrance is Dyer's Point, which bears from Petit Menan Point **NW.** $1\frac{3}{4}$ miles. Several Rocks and Ledges lie off to the Southward of this last-named point, rendering it dangerous of approach. From Petit Menan Point to the Head of the Bay the distance is about 6 miles. In entering this Bay there is a good channel which leads in close to the Dyer's Bay Ledges, which are on the West side; and there is also, about $3\frac{1}{2}$ miles above this entrance, excellent anchorage in from 4 to 5 fathoms water.

Sailing Directions for Dyer's Bay in Daytime, with favorable winds and fair weather.

From the Westward, after passing Schoodic Point and Island, bring Petit Menan Lighthouse to bear **NE.** by **E.**, and run for it on this course until you make the Buoy with Red and Black Horizontal stripes off the Southwest part of Moulton's Ledge. Petit Menan Lighthouse bears from this Buoy **E.** by **S.**; distance about 2 miles. Leave the Buoy about 300 yards on the Port hand, and steer about **NE.** When the entrance to Dyer's Bay is fairly open, run in, leaving the Ledges off Dyer's Point (which is on the Western side of entrance) close to on the Port hand; and in order to avoid Ledge which extends off about $\frac{1}{4}$ mile from a Sand Bluff on the Eastern shore, steer about **N.** $\frac{1}{2}$ **E.** $\frac{5}{8}$ mile for Stanley's Point, which is a White Rocky Head on the Western shore. When abreast this last-named point, keep in the middle of the Bay, course about **N.** by **E.** $\frac{1}{2}$ **E.** As you sail in, you will see ahead the two Sheep Islands; run for the Western point of the Westernmost Island, which is Yellow. After passing these last-named Islands, which are left on the Starboard hand, anchor anywhere to the Northward of them in from 4 to 5 fathoms at Low Tide. Small vessels may run further up, and anchor in Dyer's Cove.

From the Eastward, in order to clear Jackson's Ledge, bring Petit Menan Light to bear **W.NW.**, and run for it on this course,

keeping a sharp lookout for the large Red Buoy off Petit Menan Reef. The Lighthouse bears from this Buoy **N. $\frac{3}{4}$ E.**; distance $\frac{1}{2}$ mile. Leave this Buoy close to on the Starboard hand, and haul gradually to the Northwestward, leaving the Lighthouse about $\frac{1}{2}$ mile to the Eastward, and steer about **N.NW.** for Dyer's Point, which is the Western entrance to the Bay. Leave the Ledges off this point close to on the Port hand, and follow the directions before given. In running this last course, **N.NW.**, for Dyer's Point, you will leave the Rock called the Old Bull about 300 yards on the Starboard hand. This Rock lies about 2 miles to the Northwestward of Petit Menan Lighthouse, is bare at Low Tide, and breaks with a little motion of the sea.

Pond Island Lighthouse.

Upon the Southeastern part of Pond Island is a Lighthouse which shows a fixed White Light, and is intended to guide vessels into Narraguagus and Pigeon Hill Bays. The Lantern is upon the Keeper's dwelling. Pond Island Lighthouse bears from Petit Menan Lighthouse **NE. by N. $\frac{1}{4}$ N.**, distance $5\frac{1}{4}$ miles; from Nash's Island Lighthouse **W. $\frac{3}{4}$ N.**, distance about 4 miles.

Fog Signal.

A Bell, struck by hand, is placed near this Lighthouse.

Pigeon-Hill Bay, or Bowbear Harbor.

The entrance to this Bay bears about **N. $\frac{3}{4}$ E.** from Petit Menan Lighthouse; distance about 3 miles. This is a good harbor of refuge for small vessels, and large vessels in case of necessity may safely enter it by carefully observing the following directions.

Sailing Directions for Pigeon-Hill Bay in Daytime, with favorable winds and fair weather.

From the Westward, after passing Schoodic Point, bring Petit Menan Lighthouse to bear **NE. by E.**, and run for it on this course, keeping a sharp lookout for the large Red Buoy off Petit Menan Reef. Petit Menan Lighthouse bears from this Buoy **N. $\frac{3}{4}$**

E.; distance $\frac{1}{2}$ mile. When the Buoy is made, leave it close to on the Port hand, and steer **NE.** about 1 mile; then haul in **N.** by **W.** $\frac{1}{2}$ **W.**, keeping a sharp lookout for Egg Rock, and also the Rock called the Whale. Egg Rock is simply a small bare rocky Islet about 10 feet high; the Whale, which is bare at $\frac{1}{2}$ Ebb, lies **S. SW.** $\frac{1}{3}$ mile from Egg Rock. Leave both these Rocks on the Starboard hand, and continue the course about **N.** by **W.** $\frac{1}{2}$ **W.** until you are about $\frac{1}{3}$ mile from Wood's Pond Point, which is on the Western shore; then, with the entrance of the Bay fairly open, run up **N.NE.** about 2 miles to Chitman's Point. Give this last-named Point, which is on the West side, a good berth, to avoid the Lobster Rocks, which extend off more than half-way across the passage, and are left on the Port hand. When past these Rocks, anchor to the Northward of them, opposite the next point, in from 3 to $3\frac{1}{2}$ fathoms at Low Tide, good holding-ground.

Beating into Pigeon Bay.

In beating into this Bay, after passing the Egg Rock and the Whale Rock (before described), the first danger to be avoided is a Rock (bare at Low Tide) lying off about 100 yards from Wood's Pond Point, which is on the Western side. One-half mile above this point, about $\frac{1}{4}$ mile from shore, is another Rock, bare at very Low Tides. Above this last-mentioned Rock, on the Eastern side, is Bowbear Ledge which extends off about 300 yards from the Eastern shore, and is bare at Half Tide. From this last Ledge the passage is clear to the Lobster Rocks.

From the Eastward, bring Petit Menan Lighthouse to bear **W. NW.**, leaving Jackson's Ledge well to the Northward. Continue this course for the Lighthouse until about $\frac{3}{4}$ mile from it; then steer **N.** by **W.** $\frac{1}{2}$ **W.** until you make Egg Rock and the Whale Rock (before described); then follow the directions before given.

Douglass Harbor.

This convenient Harbor, which lies between Pond Island on the East and the Douglass Islands on the West, bears about **N.NE.** 5 miles from Petit Menan Lighthouse. There is good anchorage in it

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in about 8 fathoms water, with good holding-ground. It is easy of access, and is said to be free from ice in the winter.

Sailing Directions for Douglass Harbor in Daytime, with favorable winds and fair weather.

From the Westward, after passing Schoodic Point and Island, bring Petit Menan Lighthouse to bear about NE. by E., and run for it. As you approach it, keep a sharp lookout for the large Red Buoy off Petit Menan Reef. Petit Menan Lighthouse bears from this Buoy N. $\frac{3}{4}$ E.; distance $\frac{1}{2}$ mile. Leave this Buoy a short distance on the Port hand, and when Pond Island Lighthouse bears N. by E. $\frac{3}{4}$ E., run for it on this course. As you approach this last-named Lighthouse, you will see on the Port bow a large Island showing a bare White Rocky surface without grass or trees upon it; this is Bowbear Island. To the Eastward of this will be seen the Douglass Islands, which are well wooded. The two Southernmost of the group present a peculiar appearance, which has given them the name of the Horse Heads; the Channel is between these last-named and Bowbear Island. When this passage is fairly open, run about N. $\frac{1}{2}$ W., passing midway between them, leaving Bowbear Island on the Port, and the Douglass Islands on the Starboard hand. Continue the course N. $\frac{1}{2}$ W. until about $\frac{1}{2}$ mile to the Northward of the Western Douglass Island; then steer E. $\frac{1}{2}$ N. toward Pond Island, passing about 200 yards to the Northward of the East Douglass Island; haul round this last-named Island, and run to the Southward, and anchor between it and Pond Island in about 8 fathoms water, good holding-ground.

In beating in or out of this harbor, care should be taken to avoid a Ledge lying off about $\frac{1}{4}$ mile from the North end of the Western Douglass Island, and also another Ledge on the Western side of the passage about 250 yards from shore.

Narraguagus Bay and River.

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The entrance to this Bay is about 6 miles NE. by N. from Petit Menan Lighthouse, and about 3 miles W. by N. from Nash's Island Light. It is over 2 miles wide, and its general course is about North over 4 miles to the entrance of Narraguagus River. About

4¾ miles from Pond Island Lighthouse, upon the Western bank of this River, is the village of Millbridge. About 7 feet water can be carried up to this place at Low Tide.

**Sailing Directions for Narraguagus Bay and River
in Daytime, with fair weather and favorable
winds.**

From the Westward, after passing Schoodic Point, bring Petit Menan Lighthouse to bear **NE.** by **E.**, and run for it on this course, keeping a sharp lookout for the large Red Buoy off Petit Menan Reef. Petit Menan Lighthouse bears from this Buoy **N.** ¾ **E.**; distance ½ mile. When the Buoy is made, leave it close to on the Port hand, and gradually haul to the Northward until Petit Menan Lighthouse bears **SW.** ¾ **W.**; on which bearing keep it, and steer **NE.** ¾ **E.** for Nash's Island Light, keeping a sharp lookout for the Red Buoy which lies off the Southern part of Jordan's Delight Ledge. Petit Menan Lighthouse bears from this Buoy **SW.** ¾ **S.** about 3 miles. When this last-named Buoy is made, leave it well on the Port hand, and continue the course **NE.** ¾ **E.** past Jordan's Delight Island, until Pond Island Lighthouse opens to the Eastward of it; then steer in about **N.** by **W.**, leaving Pond Island about ½ mile on the Port hand. When abreast this last-named Island, or its Southeast part bears West, haul up **NW.** by **N.**, leaving the Black Buoy off the North part of Pond Island on the Port hand. As you sail in, you will see on the Starboard an Island having some peculiar White Rocks in its middle; this is Trafton's Island. Haul gradually round the West end of this Island, leaving it about ¼ mile on the Starboard hand, and steer **N.** by **E.** ½ **E.** On this course you will see a Red Spindle with Wheel on top; this is on Trafton's Island Ledge, and is left on the Starboard hand. When abreast this last-named Spindle, steer more Westerly; leaving the Black Buoy No. 3, on the Lower Middle Ground, on the Port hand, and the Red Buoy No. 2, off lower end of Upper Middle, on the Starboard hand. If bound up to Millbridge, it is advisable to anchor off the lower Steamboat Wharf, and take a pilot. Vessels of more than 12 feet draught should, at Low Tide, anchor between Trafton's Island and the Red Spindle on Trafton's Island Ledge.

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mile on the Starboard hand, and steer for Pond Island Lighthouse, bearing about W. by N. When about $\frac{1}{2}$ mile from it, and the town opens to the Westward of Trafton's Island, steer NW. by N., and follow the directions before given.

Nash's Island Lighthouse.

Upon a bare rocky Islet called Nash's Island is a Lighthouse which shows a fixed Red Light. This Lighthouse bears from Petit Menan Lighthouse NE. by E., distance about 8 miles, and is intended to guide vessels into Pleasant Bay, Cape Split Harbor, and Moose-A-Bec Reach.

Harrington River.

The entrance to this River bears about N.NW. from Nash's Island Lighthouse; distance 4 miles. The general course of this River from its entrance is N.NE. for 5 miles; then N.NW. $1\frac{1}{4}$ miles to the village of Harrington. About 6 feet water at Low Tide can be carried up to Nash's Point, which is about 5 miles from the entrance. Above this, there is no channel at Low Tide. On account of the numerous shoals and ledges in this River (none of which are Buoyed at this time), it is advisable for strangers bound to this place to take a pilot.

Pleasant Bay and River.

The entrance to this Bay is about 3 miles North from Nash's Island Lighthouse. Its general course and distance from its mouth to the entrance of Pleasant River is about N.NE. $3\frac{1}{2}$ miles; from the mouth of Pleasant River to Addison the course is about N.NE. $3\frac{1}{4}$ miles. There are many dangerous Rocks and Ledges in this Bay and River, which at this date (1880) are not Buoyed. Strangers should not, therefore, attempt to enter them without a

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Cape Split Harbor.

The entrance to this convenient harbor of refuge, which is easy of access, bears about NE. by N. from Nash's Island Lighthouse; distance 2 miles. This Harbor is a wide cove about $1\frac{1}{4}$ miles in

length, and more than $\frac{1}{2}$ mile in breadth; 3 fathoms water can be found at the anchorage, with excellent holding-ground. It is exposed to Southerly or Southwest winds.

Sailing Directions for Cape Split Harbor in Day-time, with favorable winds and fair weather.

From the Westward, after passing Schoodic Point, bring Petit Menan Lighthouse to bear **NE.** by **E.**, and run for it on this course, keeping a sharp lookout for the large Red Buoy off Petit Menan Reef. Petit Menan Lighthouse bears from this Buoy **N. $\frac{3}{4}$ E.** $\frac{1}{2}$ mile. When the Buoy is made, leave it close to on the Port hand, and gradually haul to the Northward until Petit Menan Lighthouse bears **SW. $\frac{3}{4}$ W.**, on which bearing keep it, and steer **NE. $\frac{3}{4}$ E.** for Nash's Island Lighthouse, keeping a sharp lookout for the Red Buoy which lies off the Southern part of Jordan's Delight Ledge.* Petit Menan Lighthouse bears from this Buoy **SW. $\frac{3}{4}$ S.** about 3 miles. When this last Buoy is made, leave it well on the Port hand, and run for Nash's Island Lighthouse, keeping it a little on the Port bow. As you approach it, you will see Cone Island, which is the first to the Eastward of the Lighthouse; and also Flat Island, which bears from Nash's Island Lighthouse **E. SE.**, distance $1\frac{3}{4}$ miles. Pass in midway between these two last-named Islands, and steer **N. $\frac{1}{2}$ E.**, leaving a remarkable-looking Islet, called Ladle Island, about $\frac{1}{2}$ mile on the Port hand. When past this last-named Island, the Harbor will be open; then run in, keeping the Western shore best aboard, and anchor where you please, in about 3 fathoms water at Low Tide. With strong Southerly or Southwest winds, it is advisable to anchor in Tabbott's Cove, which is on the East side of this harbor, about $\frac{1}{4}$ mile above its entrance. Here you may moor **NW.** and **SE.** and lie safe from all winds.

Channel to the Northward of Nash's Island Lighthouse.

After passing the Red Buoy which lies off the Southwest part of Jordan's Delight Ledge, steer **NE. $\frac{1}{2}$ E.** As you approach Nash's Island Light, you will see, about 1 mile to the Northward of it, a

* There is said to be a Ledge, with 18 feet water upon it, lying about **NE. $\frac{1}{4}$ E.** $2\frac{1}{4}$ miles from Petit Menan Light.

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Coming from the Eastward, outside of all the Ledges and Islands, when Nash's Island Light bears N. by W., run for it on this course until the passage between Cone and Flat Islands (before described) is fairly open; then run in as before directed.

High Water.

It is High Water in Cape Split Harbor 30 minutes before it is at Boston. Common Tides rise about $11\frac{1}{2}$ feet.

Moose-A-Bec Reach.

The Western entrance to this passage is about $2\frac{3}{4}$ miles North-east from Nash's Island Lighthouse. It lies between the main land on the North, and a group of Islands on the South. Its length from Tabbott's Narrows to Mark Island is about 8 miles, and in some places it is very narrow. The least water in this Reach is about 6 feet (at Low Tide), which is upon Moose-A-Bec Bar, near its Eastern entrance. There are many dangers in it, but those lying in and near the channels are marked with Spindles and Buoys. Good anchorage is also found in all winds, and strangers may safely pass through it by carefully observing the following directions.

Sailing Directions for Moose-A-Bec Reach in Day- time, with favorable winds and fair weather.

Note.

Masters of vessels should bear in mind that in sailing from Nash's Island Light through Moose-A-Bec Reach, Black Buoys and Black Spindles must be left on the Starboard hand, and Red Buoys and Red Spindles on the Port hand. In sailing to the Westward

through this Reach Red Buoys and Red Spindles must be left on the Starboard hand, and Black Buoys and Black Spindles on the Port hand.

From the Westward follow the directions before given for Cape Split Harbor, and run for Nash's Island Lighthouse, bearing **NE.** $\frac{1}{2}$ **E.** Leave this Lighthouse about $\frac{1}{3}$ mile on the Starboard hand, passing about midway between it and the Islands called the Big Pot and Ladle (before described). When Nash's Island Lighthouse bears **SW.** by **W.** $\frac{1}{4}$ **W.**, keep it on that bearing and steer **NE.** by **E.** $\frac{1}{4}$ **E.** for the entrance of Tabbott's Narrows. As you sail in, you will see on the Port, Sheep Island, which lies close to the Main Land. This is a remarkable looking Island, being high, rocky, and nearly bare. On the Starboard will be seen Ram Island, which is smaller than Sheep Island, and at this time is covered with a thick growth of trees. The Narrows, which are about $\frac{1}{3}$ mile wide, lie between these two Islands. As you enter this passage, keep a sharp lookout for the Black and Red Buoys, off Tabbott's Rock and Ram Island Ledge. When these are made, pass midway between them, carrying about 6 fathoms water, and make good the course **NE.** by **E.**, leaving Shabbitt Island, which is low and wooded, about 400 yards on the Starboard hand. Continue the course **NE.** by **E.** As you enter the Reach, you will see on the Starboard a Red Spindle with round Cage on top. When this Spindle bears **E.** $\frac{1}{4}$ **N.** steer **E.** $\frac{1}{2}$ **S.**, leaving it about 250 yards on the Port hand, and make good the course **E.** $\frac{1}{2}$ **S.**, $2\frac{1}{3}$ miles to Red Buoy off Cumming's Ledge. Leave this Buoy about 150 yards on the Port hand, and continue the course **E.** $\frac{1}{2}$ **S.** $1\frac{1}{2}$ miles to the Black Buoy off the Northern part of Horse Ledge. If it is Low Tide, and your vessel draws more than 6 ft. water, and the wind is not favorable to run through the Seguin Passage, you must anchor off the village of Jonesport, and, in order to cross the bar safely, wait for Flood Tide. There is about 18 feet upon Moose-A-Bec Bar at High Water. Leave the Black Buoy off Horse Ledge, close to on the Starboard hand, and steer about **E.** by **S.** $\frac{1}{4}$ **S.**, leaving the Black Buoys and Spindle on the Starboard, and the Red Buoys on the Port hand. When about midway between the Red Buoy No. 6 and Black Buoy No. 1, you will then be on the shoalest part of the Bar, and must make good the course East, leaving the two small, bare, Rocky Islets called the Virgin's Breasts, the Black Spindle on Gilchrist's Rock and Mark

Island (which is the first) on the Starboard hand, and the Red Buoy off Leighton's Ledge and Bay Ledges on the Port hand. In order to clear the dangerous shoals called the Eastern Ledges, when abreast Mark Island, which is bold on the Northern part, continue the course East about 2 miles; then make good the course **E. SE.**, leaving Libby Island Lighthouse well on the Port hand.

Mark Island bears from the Eastern Ledges, which are bare at Low Tide, **W.** by **N.** $\frac{1}{2}$ **N.**; distance $1\frac{1}{4}$ miles.

Seguin Passage.

In sailing through Moose-A-Bec Reach at Low Tide, with winds from **W.** by **S.** to **N.** by **E.** by way of North, you may safely carry 11 feet water through this passage by carefully observing the following directions.

After passing the village of Jonesport, keep a sharp lookout for the Black Buoy No. 7, off North part of Horse Ledge. Leave this Buoy close to on the Starboard hand, and make good the course **E.** by **S.** $\frac{1}{2}$ **S.**, leaving the following Buoys and Spindle on the Starboard hand. First, the Black Buoy No. 5, off Sand Ledge; second, the Black Spindle on Snow's Rock with Cage on top; and lastly, the Black Buoy No. 3, off the Northern part of Little Ledge. Haul round this last Buoy, leaving it close to on the Starboard hand, and steer **S.** $\frac{1}{2}$ **W.**, leaving the Red Buoy No. 2 off the South end of Little Ledge on the Port, and the Red Buoy, No. 4 and No. 2 off Nova's Rock and Southwest Ledge, both on the Port hand; leave the last-named off Southwest Ledge close to on the Port hand, and steer **SE.** by **E.** $\frac{1}{2}$ **E.** about $\frac{3}{4}$ mile, then **E.** by **S.** about $\frac{1}{2}$ mile, leaving the Red Buoys on the Port, and the Black Buoys and Black Spindle with Cage on top on Moose Rock, on the Starboard hand. If bound to the Eastward, after passing the Black Buoy No. 1, off Seguin Ledge, which is the last in the passage, make good the course **E. SE.**, leaving the dangerous shoals called the Eastern Ledges well on the Port hand.

Mark Island.

This Island, which lies near the Eastern part of the entrance to Moose-A-Bec Reach, is the landmark for vessels bound to the West-

ward through this passage. It is high and rocky, and at this time is covered with trees. In coming from the Eastward, a large round Head will be seen on its Western part, which appears over the trees as if it were in the middle. The Northern part of this Island is bold, but a Ledge extends off about $\frac{1}{8}$ mile from its Southern part. Vessels bound through the Seguin Passage must leave this Island to the Northward, but those bound over Moose-A-Bec Bar leave it to the Southward.

Sailing Directions for Moose-A-Bec Reach in Day-time, with favorable winds and fair weather.

Note.

At Low Tide there are about 6 feet water upon Moose-A-Bec Bar, at Half Flood 12 ft., and at High Water 18 feet. Vessels, therefore, of more than 6 feet draught must wait for Flood Tide.

From the Eastward, leave Libby Island about 2 miles on the Starboard hand, and when the Lighthouse bears North, steer **W. $\frac{1}{2}$ N.** about 5 miles, then Mark Island, which lies near the Eastern entrance to Moose-A-Bec Reach, will be distant about 3 miles; then haul more Northerly, keeping a sharp lookout for the dangerous shoals called the Eastern Ledges. Mark Island bears from them **W. by N. $\frac{1}{2}$ N.**; distance $1\frac{1}{4}$ miles. When this last-mentioned Island bears West, run for it on this course and leave it about 300 yards on the Port hand. As you sail in, you will first see on the Starboard the Red Buoy No. 2, off the South part of the Bay Ledges. On the Port will be seen the Black Spindle on Gilchrist's Rock, and farther in the Red and Black Buoys on Moose-A-Bec Bar; leave the Red Buoys and Red Spindles on the Starboard, and the Black Buoys and Black Spindles on the Port hand. When midway between the Red Buoy No. 6 and Black Buoy No. 1, you are then on the shoalest part of the Bar, and must steer about **W. by N. $\frac{1}{2}$ N. $\frac{3}{4}$** mile to Black Buoy No. 7, off the North part of Horse Ledge; leave this Buoy close to on the Port, and make good the course **W. $\frac{1}{2}$ N. $1\frac{1}{8}$** miles to Red Buoy off South part Cumming's Ledge; leave this Buoy on the Starboard hand, and continue the course **W. $\frac{1}{2}$ N. $2\frac{3}{8}$** miles to the Red Spindle on Fessenden's Ledge. Leave this Spindle about 200 yards on the Starboard, and continue the course about $\frac{3}{4}$ mile; then steer **SW. by W.** for Tabbott's Narrows, leaving

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Shabbit's Island about 400 yards on the Port hand. When past this Island, keep a sharp lookout for the Red and Black Buoys at the entrance of the Narrows. When these are made, pass midway between them, and steer **SW.** by **W.** $\frac{1}{4}$ **W.**, leaving Nash's Island Lighthouse about $\frac{1}{2}$ mile on the Port, and also passing about midway between it and the Islands called the Big Pot and Ladle (before described). If bound inside the Petit Menan Ledges, bring Nash's Island Lighthouse to bear **NE.** $\frac{3}{4}$ **E.**, and steer **SW.** $\frac{3}{4}$ **W.** until you make Petit Menan Lighthouse; then bring it to bear **SW.** $\frac{3}{4}$ **W.**, and steer for it, leaving the Red Buoy off Jordan's Delight Ledge well on the Starboard hand. After passing this Buoy, haul more Southerly, and leave the large Red Buoy off Petit Menan Reef on the Starboard hand. Petit Menan Lighthouse bears from this last-named Buoy **N.** $\frac{3}{4}$ **E.** about $\frac{1}{2}$ mile.

Directions for the Seguin Passage from the East-ward.

If it is Low Tide, and your vessel draws more than 6 and not more than 11 feet water, you may (with winds from **E.NE.** to **S.SW.** by way of South) safely pass through this Channel by carefully observing the following directions.

From the Eastward, leave Libby Island about 2 miles on the Starboard hand, and when the Lighthouse bears North, steer **W.** $\frac{1}{2}$ **N.** about 5 miles, then Mark Island, which lies near the Eastern entrance to Moose-A-Bec Reach, will be distant about 3 miles. Bring this Island to bear **NW.** by **W.** $\frac{1}{2}$ **W.**, and run in, keeping it a little on the Starboard bow. On this last course the dangerous shoals called the Eastern Ledges will be left well on the Starboard hand. Mark Island bears from these last-named dangers **W.** by **N.** $\frac{1}{2}$ **N.**; distance $1\frac{1}{4}$ miles. When about $\frac{1}{2}$ mile from the Island, you will see on the Port the Buoys and Spindle which mark the entrance to the Seguin Passage; the Easternmost Buoy, which is Black, No. 1, lies off the Northern part of Seguin Ledge, and bears from the Eastern part of Mark Island **SW.** by **S.** $\frac{1}{2}$ mile. As soon as this Buoy is made, run for it, and leave it close to on the Port hand. When past it, steer about **W.** by **N.** $\frac{1}{3}$ mile, leaving two Red Buoys on the Starboard, and one Black Spindle and one Black Buoy on the Port. After passing these, steer about **NW.** by **W.** $\frac{1}{2}$ **W.** about one mile, leaving the Red Buoy No. 6, off the Southwest part of Long Ledge, on the Starboard

hand; continue the course **NW.** by **W.** $\frac{1}{2}$ **W.** for the Red Buoy No. 2, leaving it on the Starboard hand. After passing it, haul up **N.** $\frac{1}{2}$ **E.**, leaving the Red Buoy No. 4 on the Starboard, and the Black Buoy No. 3, off Little Ledge, close to on the Port hand. When past this last Buoy, steer about **W.** by **N.** $\frac{1}{2}$ **N.** for the Buoy off the North part of Horse Ledge, leaving it close to on the Port, and follow the directions before given.

High Water.

It is High Water on Moose-A-Bec Bar 32 minutes before it is at Boston. Common Tides rise about $11\frac{3}{4}$ feet.

Jonesport Harbor.

This Harbor, which is a small shallow Cove, lies on the Northern side of Moose-A-Bec Reach near its Eastern entrance. Vessels from the Eastward or Westward bound to this place should follow the directions before given for this Reach, and at Low Tide anchor off the village in from 7 to 9 fathoms water.

Head Harbor.

Lighthouses.

Upon Mistake Island, which forms the Southern side of Head Harbor, is a Lighthouse which shows a flashing White Light. This Light is intended to guide vessels into this Harbor, and also into Englishman's Bay.

Sailing Directions for Head Harbor in Daytime, with favorable winds and fair weather.

Coming from the Westward, outside Petit Menan Ledges, as soon as the Lighthouse on Mistake Island is made, bring it to bear **NE.** by **N.**, and run for it on this course. Leave this Lighthouse about $\frac{3}{4}$ mile on the Port hand, and when Head Harbor is fairly open, bearing North, then run in, keeping midway the passage, and anchor off White Point, or run up into the Cow Yard, or Inner

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Harbor; the latter has from 2 to 4 fathoms water in it at Low Tide, and is well sheltered from all winds.

From the Eastward, leave Libby Island Lighthouse about 2 miles on the Starboard hand, and steer W. by S. As soon as the Lighthouse on Mistake Island is made, bring it to bear W. by S., and run for it on this course until Head Harbor is fairly open, bearing North; then run in, leaving the Lighthouse to the Westward, and follow the directions before given.

Whistling Buoy.

A Whistling Buoy has been placed off about 2 miles S. by E. $\frac{3}{4}$ E. from the Lighthouse on Mistake Island.

s on the Northern
entrance. Vessels
ace should follow
Low Tide anchor

Machias Bay and River.

The entrance to this Bay, which lies between Libby Island on the West and Cross Island on the East, is NE. by E. $\frac{1}{4}$ E. from Mount Desert Rock Lighthouse, distance about 49 miles, and W. SW. from West Quoddy Head; distance about 21 miles. About 6 miles from the entrance is Machias River, which empties into this Bay. Machiasport is situated on the West bank of this River, near its mouth, and about 4 miles above the port is the city of Machias. About 14 feet water may be carried up to the anchorage off Machiasport at Low Tide. About 12 feet water can be carried from Machiasport to the Bridge, but there is not more than 9 or 10 feet in the Channel up to Machias.

ern side of Head
White Light. This
or, and also into

Libby Island Lighthouse.

in Daytime,
weather.

Upon the Southern part of this Island is a Lighthouse which shows a fixed White Light. At this date (1880) a Fog Bell is placed near it.

Bearings and Distances from Libby Island Lighthouse.

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Harbor is fairly
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		Distance.
Machias Seal Island Lighthouses, .	SE. $\frac{1}{2}$ E., . .	12 miles.
Bryer's Island Lighthouse, . . .	SE. $\frac{1}{2}$ E., . .	46 "
Seal Island (Cape Sable) Lighthouse, .	SE. by S. $\frac{3}{4}$ S.,	92 "
Mount Desert Rock Lighthouse, .	SW. by W. $\frac{1}{8}$ W.,	49 "

Avery's Rock.

A Lighthouse has been built upon this Rock which shows a fixed Red Light. It bears from the Lighthouse upon Libby Island **NE.** by **N.**; distance $5\frac{1}{2}$ miles.

**Sailing Directions for Machiasport in Daytime,
with favorable winds and fair weather.**

Coming from the Westward outside Petit Meron Ledges, when up with the Whistling Buoy off to the Southward of the Lighthouse on Mistake Island, steer about **NE.** by **E.** $\frac{1}{4}$ **E.**, leaving the Lighthouse on Libby Island about $\frac{3}{4}$ mile on the Port hand. After passing this Lighthouse, haul gradually to the Northward until it bears **SW.** by **S.**; then steer **NE.** by **N.** As you sail in, you will see on the Starboard the large Red Buoy No. 2, which lies off the Southwest end of Cross Island Ledge; this Ledge extends from Cross Island, and the Buoy, which is left on the Starboard hand, bears **NE.** by **E.** $\frac{1}{2}$ **E.** from Libby Island Light. On the Port will be seen the Lighthouse on Avery's Rock, which may be left close to on the Port hand. When abreast this last-mentioned Lighthouse, steer **N.NE.** for Round Island, leaving it on the Port hand. When past it, you will see, a short distance to the Northward of it, a Black Buoy No. 3, which is left on the Port hand. When past this Buoy, steer **NW.** by **N.** for the Black Buoy No. 5, off the Middle Ground; leave this Buoy on the Port, and steer about **W.NW.**, keeping the Southwestern shore best aboard, in order to avoid the flats which lie upon the opposite side of the Channel. As you enter the River you will see the Red Buoy No. 2, which marks the Western end of Holmes Point Flats; leave this Buoy close to on the Starboard hand, and steer about **N.** by **E.** $\frac{1}{2}$ **E.**, keeping in the middle of the River to the anchorage off Machiasport. On the above courses there will be deep water as far as the Lighthouse upon Avery's Rock, and from that point not less (in the Channel) than 14 feet to Machiasport. If bound up to Machias, it is advisable to take a pilot at Machiasport. You will have good anchorage a short distance to the Northwest of the Black Buoy, which lies to the Northward of Round Island.

Coming from West Quoddy Head or the Northeastward, steer about **SW.** by **W.** $\frac{1}{2}$ **W.** along the shore, and as soon as Libby Island Lighthouse is made, bring it to bear **W.** by **N.**, and run for

it on this course until about 2 miles from it; then steer **NW.** until it bears **SW.** by **S.** when the course is as before given.

High Water.

It is High Water in Machias Bay 29 minutes before it is at Boston. Common Tides rise about $13\frac{1}{2}$ feet.

Little River.

The entrance to this excellent harbor of refuge is about 10 miles Northeasterly from Libby Island Lighthouse, and about 13 miles **SW.** by **W.** $\frac{1}{2}$ **W.** from West Quoddy Head.

Little River Lighthouse.

This Lighthouse is built upon an Island lying in the middle of the entrance to this River, and shows a Fixed Light varied by White Flashes. At this date a Fog Bell is placed near this Lighthouse.

Remarks.

The Ship Channel into this River is between the Lighthouse on the Southwest and a high steep rocky Head on the Northeast (with a few trees upon it) called Eastern Knubble; to the Eastward of this Knubble is a high square bare Tower-like Head called Great Head. Little River Head, which is on the Southwest side of the entrance, is of moderate height. The Rocks on the Southern and Eastern faces of this Head have large White spots painted on them just below the top of the Cliffs; these are for the purpose of enabling vessels from the Westward to recognize the entrance, as no opening can be seen until past this Head.

Sailing Directions for Little River in Daytime, with favorable winds and fair weather.

From the Westward, when Libby Island Lighthouse bears **N.** **NW.**, distance 3 or 4 miles, steer about **E.NE.** $9\frac{1}{2}$ miles. As soon as Little River Head is made (which may be known by the White Spots painted near it), haul more Northerly, and when the Lighthouse is open, run in, leaving it close to on the Port hand,

W
69

Dangers.

From **N.** by **W.** to **S.** by **E.** by way of East from these Lighthouses there are many Shoals, Rocks, and sunken Ledges. We shall therefore only give bearings and distances of a few of the dangers lying to the Northward and Northeastward of them, as no stranger should attempt to pass between Machias Seal Island Lights and the Gannett Rock Lighthouse.

North Shoal.

Machias Seal Island Lighthouses bear from this Shoal (which has but 7 feet water upon it at Low Tide) **S.** by **E.** ; distance 3 miles.

North Rock.

Machias Seal Island Lighthouses bear from this Rock (which is bare) **SW.** by **S.** ; distance $2\frac{1}{4}$ miles. Between the North Shoal and this Rock there are several spots having from 6 to 8 feet water upon them.

Middle Shoal.

Machias Seal Island Lighthouses bear from this Shoal (which has 17 feet water upon it) **W.SW.** ; distance 5 miles.

It is said that a Rock, upon which several large vessels have been wrecked, lies about West $3\frac{1}{2}$ miles from these Lighthouses ; the author of this work searched for it in 1857 without success. It is, however, advisable for vessels bound up the Bay of Fundy, and intending to pass to the Northward of Grand Menan Island, to give these Lighthouses a good berth to the Southward.

Passamaquoddy Bay and St. Croix River.

This large deep Bay, which separates the British Provinces from the United States, lies about **NE.** and **SW.** between the shores of Maine and New Brunswick. Into the Northwest corner of Passamaquoddy Bay empties the St. Croix River, which also separates the Province of New Brunswick from the State of Maine. The town of Calais is situated on the Western bank, about 13 miles from its mouth ; the town of Eastport is situated on Moose Island, about 10 miles below the mouth of this River.

Passages into Passamaquoddy Bay.

There are several passages into this Bay: the Main Ship Channel, which lies between East Quoddy Head and Deer Island; the Southern, through Lubec Narrows, which opens between West Quoddy Head and the Southern part of Campobello Island. Only 6 feet water can be carried through Lubec Narrows at Low Tide. An appropriation, however, has been recently made by the United States government for the purpose of improving this channel.*

West Quoddy Head Lighthouse.

Upon West Quoddy Head, South side of entrance to Lubec Narrows, is a Lighthouse which shows a fixed White Light. Near this Lighthouse is placed a Steam Whistle, giving blasts of 8 seconds at intervals of 52 seconds.

Bearings and Distances from West Quoddy Head Lighthouse.

		Distance.
Machias Seal Island Lighthouses, .	SW. $\frac{3}{4}$ S.,	20 miles.
South Wolf Island Lighthouse, . .	E. by N. $\frac{3}{4}$ N.,	12 "
Point Lepreau Lighthouses, . . .	E. by N. $\frac{1}{2}$ N.,	26 "
Cape Spencer Lighthouse, . . .	E. by N.,	51 "

East Quoddy Head Lighthouse.

Upon East Quoddy Head, South side of entrance to Passamaquoddy Bay, by Ship Channel, is a Lighthouse which shows a Fixed Light.

Bearings and Distances from East Quoddy Head Lighthouse.

		Distance.
West Quoddy Head Lighthouse,	Southwesterly,	9 miles.
Lighthouse at Bliss Harbor, . .	NE. $\frac{1}{2}$ E.,	4 $\frac{1}{4}$ "
South Wolf Island Lighthouse, .	SE. by E. $\frac{3}{4}$ E.,	7 $\frac{1}{2}$ "
Lighthouse on Swallow's Tail (Grand Menan),	S. by E.,	14 "

* Since the above was written, we are informed that workmen are engaged deepening the passage leading through Lubec Narrows into Passamaquoddy Bay.

Bay.

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Distance.	
	20 miles.
N., 12 "	
N., 26 "	
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Head Light-

Distance.	
	9 miles.
. . 4 1/4 "	
E., 7 1/2 "	
. . 14 "	

men are engaged
 to Passamaquoddy

Eastport Harbor.

This Harbor is situated at the end of Passamaquoddy Bay. It has two entrances: the Main Ship Channel, which lies between East Quoddy Head and Deer Island; and the Southern, by way of Lubec Narrows. The latter passage, however, at this date (1879) is only fit at Low Tide for light-draught vessels.

Sailing Directions by Ship Channel for Eastport Harbor, in Daytime, with favorable winds and fair weather.

From the Westward, when past Mount Desert Rock (which may be left about a mile on either hand), bring the Lighthouse to bear SW. by W. $\frac{3}{4}$ W., and steer NE. by E. $\frac{3}{4}$ E., for West Quoddy Head; distance from Mount Desert Rock, 72 miles. If this course is made good, the large Buoy off Southeast Rock, painted in Red and Black Horizontal stripes (and which bears S. by E. 4 miles from Petit Menan Lighthouse), will be left 6 miles on the Port hand; the Whistling Buoy which lies S. by W. 2 miles from Moose-A-Bec Lighthouse, 3 miles on the Port hand; Libby Island Lighthouse, $4\frac{1}{4}$ miles on the Port; Little River Lighthouse, $2\frac{1}{2}$ miles on the Port; and West Quoddy Head Lighthouse about $3\frac{1}{4}$ miles on the same hand. Machias Seal Island Lighthouses will be left about 7 miles on the Starboard hand. Continue the course NE. by E. $\frac{3}{4}$ E. until West Quoddy Head Lighthouse bears W.NW., distance about $3\frac{1}{4}$ miles; then steer about NE. by N. $\frac{1}{2}$ N., along the shore of Campobello Island until you make East Quoddy Head Lighthouse. When this bears from NW. by N. to N.NW., run in, and, with light winds and Flood Tide, haul round this Head, which is bold, leaving it not more than $\frac{1}{8}$ mile upon the Port hand. When past this last-mentioned Lighthouse, steer Southwesterly, and in order to avoid the Ledges on the Starboard hand, do not keep more than from $\frac{1}{8}$ to $\frac{1}{4}$ mile from the Campobello shore, which is bold and free from dangers. Continue the course along it, leaving several Islands and Ledges on the Starboard, and a deep opening called Harbor Delute on the Port hand. When the town of Eastport bears W.SW., then run for it on this course. If bound to this place, in order to avoid the deep water and strong current, anchor close in to the Wharves. In passing near the Wharves at Low Tide, heavy-draught vessels must be care-

ful to avoid two Rocks, one having 14 feet water on it, the other 16 feet. The anchorage off Eastport is called Friars' Roads, but the water in them is very deep, with a strong current. These Roads are also exposed to Northeast winds. For vessels only making a harbor here, it is advisable to anchor in Broad Cove, which lies near the Southern part of the town, is free from current, and is also sheltered from all winds. This Cove is the real harbor of Eastport. In running into Broad Cove, in order to avoid Shackford Ledge, which lies on the Port hand off Shackford Head, keep the Eastern shore best aboard, and anchor in from 4 to 5 fathoms water at Low Tide. Here you will have excellent holding-ground. In beating from East Quoddy Head to Eastport, keep the Campobello shore best aboard, as this is bold and free from dangers. Mariners should bear in mind that after passing Machias Seal Island Lights, bound to Eastport or up the Bay of Fundy, the tide rises from 18 to 20 feet. In passing East Quoddy Head Light, with light winds, haul close round the Head, as the first of the Flood sets directly on some of the Ledges on the Starboard hand.

Upon the South Wolf Island is a Lighthouse which shows a White Revolving Light. East Quoddy Head Lighthouse bears from this Light on the South Wolf NW. by W. $\frac{3}{4}$ W. $7\frac{1}{2}$ miles. Vessels from the Eastward, bound to Eastport, when the Light on the South Wolf Island is made, may bring it to bear W. $\frac{1}{2}$ N., and run for it on this course, leaving it about $\frac{3}{4}$ mile on the Starboard hand. When past it, steer NW. by W. for East Quoddy Head Light, and follow the directions before given.

Head Harbor.

About $\frac{1}{4}$ mile to the Southwest of the Lighthouse on East Quoddy Head is Head Harbor Island. Between this Island and the Northeast part of Campobello Island is Head Harbor, which is about $\frac{1}{4}$ mile in width. In entering this harbor by the Eastern passage there are no dangers, and about 5 fathoms water can be carried into it at Low Tide.

A Fog Trumpet has been placed at this harbor near the Lighthouse, and in thick weather will sound blasts of 8 seconds duration, with intervals of 35 seconds between them.

Sailing Directions.

From the Westward, follow the directions before given for Eastport Harbor until the Lighthouse at East Quoddy Head bears **NW. by N.**; then run for it until the harbor is fairly open, bearing West, when you may run in, leaving this Lighthouse about 300 yards on the Starboard hand, and anchor near the Southwest part of the Island in from 5 to 8 fathoms water at Low Tide.

There is a passage into this harbor to the Westward of Head Harbor Island in which there are about $2\frac{1}{2}$ fathoms water at Low Tide, but it is narrow. Strangers will, therefore, unless necessity compels, enter by the Eastern passage.

From the Eastward, bound into Head Harbor, after passing the Lighthouse on the South Wolf Island, run for East Quoddy Head Light, bearing **NW. by W.** until about 300 yards from it; then steer about **W. by S.** into the harbor, and gradually haul South-erly, and anchor as before directed.

Harbor Delute.

This Harbor, which has but few dangers in it, lies on the North-ern side of Campobello Island; its entrance is about 2 miles **E.** by **N.** from the town of Eastport, and Southwesterly about 3 miles from the Lighthouse at East Quoddy Head.

Sailing Directions in Daytime.

From the Eastward or Westward, follow the directions for Eastport Harbor by Ship Channel until Harbor Delute opens; then run in, leaving Windmill Point, which is the first on the Northeastern side, about $\frac{1}{8}$ mile on the Port hand. When past this point, steer about **SE. by S.** $\frac{1}{2}$ **S.**, leaving two small coves on the Port hand. After passing these (in order to avoid Racer Rock, which lies in the middle of the harbor, and has 9 feet water upon it at Low Tide), keep the Eastern shore best aboard, and anchor in from 8 to 10 fathoms water at Low Tide.

The Southwest arm of this Harbor extends well up into the land, and is sheltered from all winds. About 15 feet water can be taken into it at Low Tide; but the channel is narrow. In entering

keep in the middle, and when in, keep the Southeastern shore best aboard, and anchor in from 4 to 5 fathoms water at Low Tide.

Sailing Directions for Eastport Harbor by way of Lubec Narrows, in Daytime, with favorable winds and fair weather.

Coming from the Westward, follow the directions before given for Eastport Harbor by way of Ship Channel, until West Quoddy Head Lighthouse bears **N.NE.**; then run about **NE.** by **N.** In order to avoid Sail Rock and the dangerous Whirlpool (which both lie Southeasterly from this Lighthouse), do not approach West Quoddy Head Lighthouse nearer than $\frac{3}{4}$ mile until it bears **NW.** by **W.** You are then past these dangers, and may haul to the Northwestward, keeping about 300 yards from West Quoddy Head, which is quite bold. When past this Head, steer about **NW.**, keeping a sharp lookout for the Red Buoy, No. 2, off the Middle Ground. West Quoddy Head bears from this Buoy **SE.** by **S.** $\frac{1}{2}$ **S.**; distance $\frac{3}{4}$ mile. Leave this last-named Buoy close to on the Starboard hand, and steer **N.** by **W.** $\frac{1}{2}$ **W.** As you sail in, you will see the Black Wooden Beacon, with Tripod on top, on the Western Bar. Leave this about 25 yards on the Port, and steer about **N.** by **E.**, carrying about 8 feet at Low Tide, and leaving the Red Buoy No. 4 close to on the Starboard. When past this last Buoy, steer about **NE.** by **N.** $\frac{1}{2}$ **N.**, leaving the Black Buoy No. 1 (off Eastern part of a Ledge), on the Port hand. From this last Buoy, steer **N.** by **W.** for the Eastern end of Lubec Wharves, and when abreast Leadbury Point (which is the first on the Port hand), steer through the Narrows, keeping in about mid-channel. When a short distance past the town of Lubec, you will cross the Bar, which at this date (1879) has about 6 feet water upon it at Low Tide. When you are through the Narrows, the first Island is called Pope's Folly. Leave this small Island about 250 yards on the Starboard hand, and steer up about **NE.** by **N.**, leaving Dudley's and Treat's Islands (which are both bold on their Eastern part) on the Port hand. When past these Islands, follow the directions before given for Ship Channel. Or when you are through Lubec Narrows, you may steer up **NW.** $\frac{3}{4}$ **N.** about 1 mile, passing to the Westward of these Islands, Gull Rock, and Burial Island (which is small). When past this last-named Island, haul more Northerly, and anchor off the town or in Broad Cove.

The Flood and Ebb sets strong through Lubec Narrows; sailing-vessels, therefore, cannot pass through them unless they have strong favorable winds. When you pass West Quoddy Head, if the tide is low, or wind unfavorable, anchor in Quoddy Roads about 200 yards to the Southwest of the Red Buoy No. 2, off the Middle Ground, in about $3\frac{1}{2}$ fathoms water at Low Tide.

Quoddy Roads.

These Roads, which lie a short distance to the Northward of West Quoddy Head Lighthouse, are exposed to Southeasterly winds, but have a good anchorage in from 3 to 7 fathoms water, with winds from South to **N.NE.** by way of West.

Sailing Directions for Quoddy Roads at Night-time, with favorable winds and fair weather.

From the Westward, leave West Quoddy Head Light at least $\frac{3}{4}$ mile to the Northward, and when it bears **W.NW.** haul in, leaving the Head, which is quite bold, about 300 yards on the Port. When past the Northern point of Quoddy Head, run from **N.** by **W.** to **N.NW.** $\frac{1}{2}$ mile, and anchor in about $3\frac{1}{2}$ fathoms water at Low Tide, and about $6\frac{1}{2}$ at High Tide.

From the Eastward, with Easterly or Northeasterly winds, as soon as West Quoddy Head Light is made, bring it to bear West, and run for it on this course. In order to clear Liberty Point Ledge, which is on the Northern side of the harbor, continue the course until you judge you are $\frac{1}{4}$ mile from this Light, then haul in about North, and anchor with the Light bearing about **S.SW.**, in about 4 fathoms water at Low Tide, and 7 at High Tide.

Beating in at Night.

From the Westward, leave Quoddy Head Light at least $\frac{3}{4}$ mile to the Northward, and when it bears **NW.** by **W.** haul sharp on the wind, and in order to avoid Liberty Point Ledge (which bears from West Quoddy Head Light **NE.** by **E.** $\frac{1}{4}$ **E.**, distance 1 mile) keep this Head best aboard, and anchor in from 4 to 6 fathoms water at Low Tide, the Light bearing from **S.SW.** to **SW.** from you. From

the Eastward, run for West Quoddy Head Light, bearing West, and do not haul up into the Roads until you are $\frac{1}{2}$ mile from it; then anchor as before directed. After passing the Northern point of West Quoddy Head, be careful to avoid Wormell's Ledges, which lie **E.SE.** and **W.NW.** nearly $\frac{1}{2}$ mile, and are bare at very low tides; their Northern part bears **NW.** $\frac{1}{2}$ **W.** from the Northern part of West Quoddy Head; distance about $\frac{1}{4}$ mile.

Both Coves on the Southwestern and Northeastern sides of Quoddy Roads are full of Shoals, with some Rocks and Ledges; and Flats extend off on the Northern part in some places nearly $\frac{1}{2}$ mile. In summer the Fish Weirs are excellent guides, as their outer parts are always on the edges of the channel.

Campobello Island.

The Eastern shore of this Island is bold and quite free from dangers. Vessels bound East or West, with tide and wind ahead, may anchor in any of the coves on this shore, in from 5 to 10 fathoms water.

Steam Whistle.

A Steam Whistle is placed near West Quoddy Head Lighthouse, which gives blasts in thick weather of 8 seconds at intervals of 52 seconds. Vessels, therefore, in thick weather, coming from the Westward, should keep off at least $\frac{3}{4}$ mile from the Lighthouse until it bears **W.NW.**; then run for it on this course until you judge you are about 300 yards from the Whistle, then haul in about North, keeping about 300 yards from the head, and anchor about $\frac{1}{4}$ mile North of it in the Roads, in from $3\frac{1}{2}$ to 5 fathoms water at Low Tide.

From the Eastward, in thick weather, as soon as the Whistle is heard at West Quoddy Head, bring it to bear West, and run for it on this course, until about 300 yards from it; then follow the directions before given.

Morton's Rock.

Vessels passing West Quoddy Head should beware of this Rock, which lies near the shore about $2\frac{1}{2}$ miles to the Westward of the Lighthouse on this Head. This Rock is now marked with a Red Buoy.

bearing West,
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 Lighthouse
 course until you
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 1/2 to 5 fathoms

the Whistle is
 and run for it
 then follow the

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 westward of the
 end with a Red

Lubec.

If you are bound to this place, follow the sailing directions before given for Eastport Harbor, by way of Lubec Narrows. If it is Low Water when you arrive at West Quoddy Head, anchor in the Roads and wait for High Water, when you will have slack tide to go to the Wharves.

High Water.

It is High Water at Eastport on the days of the full and change of the moon at 11h. 8m., or about 21 minutes before it is at Boston. Common Tides rise about 18 feet.

Cobscook Bay and Pembroke River.

The entrance to this Bay lies between Estes Head (which is the extreme Southern part of the town of Eastport) on the North, and Seward's Neck on the South. The entrance to Pembroke River is Northwesterly about 5 miles from Eastport. The town of Pembroke is situated about 4 miles from the entrance to this River. There are many dangers in entering Cobscook Bay and Pembroke River, and the current, which runs very strong, sets in several places on to them; it is therefore advisable for strangers bound to Pembroke to take pilots at Eastport.

St. Croix River.

The entrance to this River is about N. 3/4 W. from Eastport; distance about 10 miles. About 5 fathoms water at Low Tide can be carried up about 7 1/2 miles above its entrance; here, the River divides, the main branch turning abruptly to the Westward, and running with some changes of course for about 5 1/2 miles to the town of Calais. This town is built on the South bank of the River, 13 miles above its mouth, and 23 miles from Eastport. About 11 feet water at Low Tide can be carried up to Huckman's Point (which is on the North bank of this River about 2 miles below Calais), and 6 feet from this last point to Calais.

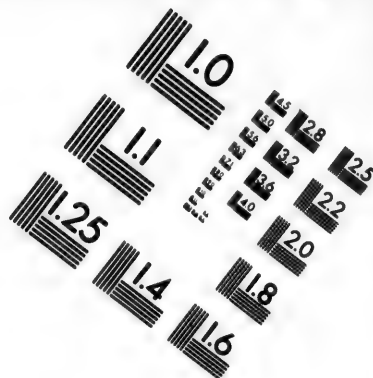
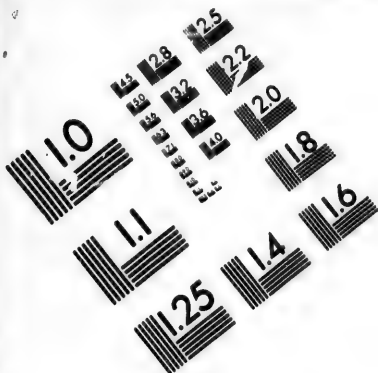
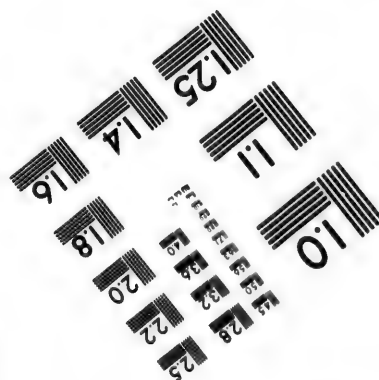
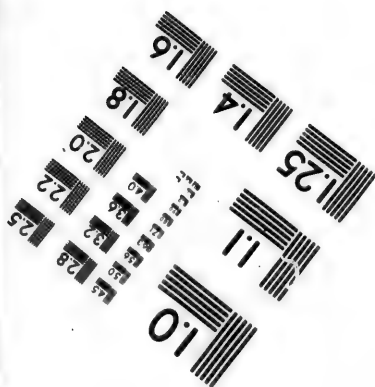
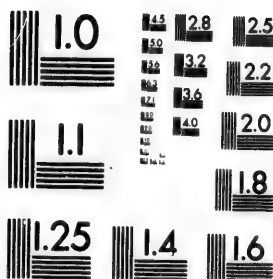


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Dochet Island Lighthouse.

Upon Docket Island, which lies about $5\frac{1}{2}$ miles from the mouth of the St. Croix River; and nearly in the middle, is a Lighthouse which shows a Fixed Light varied by flashes.

Sailing Directions for St. Croix River in Daytime, with favorable winds and fair weather.

From the Eastward or Westward follow the directions before given for Eastport Harbor until you are abreast this town; then, if you intend to go up without a pilot, and have the tide with you, and also a favorable wind, with a commanding breeze, keep about 250 yards from the Wharves. When you are nearly abreast the Northern part of the town, you will see Dog Island, which is small. In order to avoid the Whirls on the Eastern side of the passage, give this last-mentioned Island a berth of 200 yards, leaving it on the Port hand. When past Dog Island, steer about NW. by N. $\frac{1}{2}$ N. for Kendall's Head; distance about $1\frac{1}{3}$ miles. Leave this Head about 350 yards on the Port, and when past it you will soon see the Black Buoy No. 1, which lies off the Eastern part of Frost's Ledges, which are about 2 miles above Kendall's Head, opposite Clam Cove Head; leave this Buoy on the Port, and steer about N. $\frac{1}{2}$ W. $5\frac{1}{2}$ miles across Passamaquoddy Bay to the entrance of the River. As you enter this River, you will see on the Starboard the Port of St. Andrews, and likewise a low sandy Island South of this place called Navy Island; the Beacon to the Northwest of it is on Navy Island Reef. After passing this Beacon, keep about in the middle of the River, passing the village of Robbiston. As you sail up, you will see the Lighthouse, which is on Docket Island, nearly in the middle of the River, and also, about $1\frac{1}{2}$ miles South of this Lighthouse, the Black Buoy off the Southern part of Middle Ground. You may leave this Buoy on either hand, but the Channel to the Eastward of the Lighthouse is the widest; you will therefore leave this Buoy and the Red Buoy on Half-Tide Ledge, together with the Lighthouse, all on the Port hand. After passing this Lighthouse there will be seen to the Northward of it another Red Buoy, which must be left on the Port hand. When past this last Buoy, in order to clear the Shoals which lie off Sandy Point (which is on the Starboard side), steer for Devil's Head, which is on the Western side of the River, about 2 miles above the Light-

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St. Andrew's Harbor.

This Harbor, which is well sheltered, and has from 12 to 14 feet water in it at Low Tide, lies on the East side of the entrance to the St. Croix River, about 10½ miles above the town of Eastport. There are two entrances, one of which is to the Northwest of Navy Island, the other to the Southeast of it; both these passages are narrow, and have but little water in them at Low Tide.

Sailing Directions for St. Andrew's Harbor.

Vessels from the Eastward or Westward bound to this harbor may follow the directions before given for Eastport Harbor and St. Croix River until they make the Beacon off the Northwest part of Navy Island Reef. Leave this Beacon about ⅓ mile on the Starboard hand, and when the Lighthouse at the Southeastern part of the town bears SE. by E. ¾ E., run for it, passing about midway between this Beacon and the Northern shore of the harbor, and anchor off the town. If it is Low Tide when you make the Beacon, anchor about ⅓ mile Northwest of it in about 4 fathoms water, and wait for Flood Tide.

At High Water, with Southeasterly winds, you may enter this harbor to the Southeastward of Navy Island by the following directions: Leave the Southeast point of this last-named Island (which is opposite the town) about ¾ mile on the Port hand, and when the Lighthouse at the Southeastern part of the town bears NW. ½ W., run in between the Beacons on this course, leaving the Lighthouse close to on the Starboard hand, and anchor off the town.

High Water.

It is High Water in St. Andrew's Harbor on the days of the Full and Change of the Moon 10h. 50m., or about 39 minutes before it is at Boston. Common Tides rise about 23 feet.

There is another entrance to Passamaquoddy Bay called the Letite Pass. This Pass bears **NW.** by **N.** from the Lighthouse on the South Wolf Island, distance about 10 miles. This last-named Channel is narrow, and has a number of dangers at the entrance, and also within it. Strangers bound to St. Andrew's should therefore go by the way of Eastport.

Bliss Harbor.

The Western entrance to this excellent Harbor bears from the Lighthouse at East Quoddy Head **NE.**; distance about 4 miles. It has two entrances, one of which is to the Westward of Bliss Island, the other to the Eastward.

Bliss Island Lighthouse.

Upon Bliss Island, Southeastern side of entrance to this harbor, is a Lighthouse which shows a Red Fixed Light.

Bearings and Distances from Bliss Island Lighthouse.

		Distance.
East Quoddy Head Lighthouse,	SW. $\frac{1}{2}$ W.,	4 $\frac{1}{2}$ miles.
Lighthouse at South Wolf Island,	SE. by S. $\frac{1}{2}$ S.,	7 "
Lighthouse at Point Lepreau,	E. by S.,	17 "

Sailing Directions for Bliss Harbor in Daytime, with favorable winds and fair weather.

From the Westward follow the directions before given for Eastport Harbor (by Ship Channel) until you make the Lighthouse at East Quoddy Head. Leave this Lighthouse about 1 $\frac{1}{2}$ miles on the Port, and make good the course **NE.** by **E.** until the Lighthouse at Bliss Harbor bears **N.** by **W.**; then run for it on this course, leaving the Island called the White Horse and also the Ledges called the North and South Rocks well to the Westward. In order to avoid the shoal water which extends off Southwest from the Lighthouse point, give it a berth of about $\frac{1}{3}$ mile, leaving it to the Eastward. When the Lighthouse bears East, haul up into the harbor, and in order to avoid Man-of-War Rocks, which bear from the Lighthouse **NE.** by **N.** about $\frac{1}{2}$ mile, and are bare at Half-Tide,

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follow the shore on the Starboard hand (which is quite bold), keeping about 150 yards from it. When Fisherman's Cove opens, which is the first to the Southward after passing the Lighthouse, haul in midway, and anchor in about 7 fathoms water at Low Tide. The Lighthouse bears from this anchorage **W. by S.**; distance about $\frac{5}{8}$ mile.

Coming from the Southeastward, leave the Lighthouse on the South Wolf Island from $\frac{1}{2}$ to $\frac{3}{4}$ mile on the Starboard hand, and make good the course **N.NW.** for Bliss Island Lighthouse. When the Lighthouse at this harbor is made, bring it to bear **N.NW.**, and follow the directions before given.

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Westward of Bliss

From the Eastward, with Easterly winds, bound to Bliss Harbor, you may enter it by the Eastern Passage by the following directions. Leave the Lighthouse at Point Lepreau about $1\frac{1}{2}$ miles to the Northward, and when it bears **N. by E.**, steer about **W. by N. $\frac{1}{4}$ N.**, leaving the Lighthouse at Beaver Harbor on the Starboard, and the East Wolf Island well on the Port hand. When you make the Lighthouse on the East side of entrance to L'Etang Harbor, which is about 2 miles to the Eastward of the Lighthouse on Bliss Island, continue the course until L'Etang Light bears **NW. by N.**; then run for it. Give this Light a berth of about $\frac{1}{4}$ mile, leaving it on the Starboard hand, and steer in about **N.NW.**, leaving several Rocks, some of which are only bare at Half-Tide, on the Port, and the Roaring Bull (which lies about 300 yards Northwest from the Lighthouse, and is awash at High Water) on the Starboard hand. As you sail in, you will see on the Port Mink Island, which is small, and bears from the Lighthouse **W. by N.**: haul round it at a distance of 250 yards, leaving it on the Port, and when it bears South, steer about **W. by S.**, leaving Flea Island, which is also small, on the Starboard. When past this last-named Island, run for the Lighthouse on Bliss Island, bearing **SW. by W.**, until Fisherman's Cove, which is the first on the Port hand, opens; then run in, and anchor as before directed.

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High Water.

It is High Water in Bliss Harbor on the days of the Full and Change of the Moon at 11h. 15m., or about 14 minutes before it is at Boston. Common Tides rise about 22 feet.

L'Etang Harbor.

The entrance to this Harbor is **NE.** by **E.** 6 miles from the Lighthouse at East Quoddy Head, and **W.** by **N.** $\frac{1}{4}$ **N.** from Point Lepreau Lighthouse; distance 15 miles.

Pea Island Lighthouse.

Upon Pea Island, East side of entrance to L'Etang Harbor, is a Lighthouse which at this date shows a Green Fixed Light.

Bearings and Distances from Pea Island Lighthouse.

	Distance.
East Quoddy Head Lighthouse . SW. by W. , .	6 $\frac{1}{2}$ miles.
Lighthouse on South Wolf Island, S. $\frac{3}{4}$ E. , . .	7 " "
Point Lepreau Lighthouse, . . . E. by S. $\frac{1}{4}$ S. , .	15 $\frac{1}{2}$ " "

Sailing Directions for L'Etang Harbor in Daytime, with favorable winds and fair weather.

From the Westward, follow the directions before given for Eastport Harbor, by Ship Channel, until you make the Lighthouse at East Quoddy Head. Leave this Lighthouse about 1 $\frac{1}{2}$ miles on the Port, and make good the course **NE.** by **E.**, leaving the White Horse and the Ledges called the North and South Rocks, and also Bliss Island Lighthouse, well on the Port hand. When the Lighthouse at the entrance of L'Etang Harbor is made, bring it to bear **N.NE.**, and run for it on this course until about $\frac{2}{3}$ mile from the Lighthouse; then haul in for a high Bluff (on the West side of the entrance), bearing **N.** by **W.** $\frac{1}{2}$ **W.**, leaving the Colt and Mare Rocks (the former of which is bare at Half-Tide) on the Port, and the Rock called the Roaring Bull, which lies a short distance North-west from the Lighthouse, on the Starboard hand. When the Lighthouse bears **E.SE.**, steer **N.** by **E.** until it bears **S.SE.**; on which bearing keep it, and run **N.NW.**, passing about midway between McCann Island and L'Etang Head; the shore of the latter, which is on the Starboard, is very bold. When past this last-named Head, steer about **N.** $\frac{1}{2}$ **W.**, and anchor at Low Tide in from 7 to 9 fathoms water, the Southeastern part of the town bearing from **NE.** by **E.** to **E.NE.**

Vessels from the Westward, with Southerly or Westerly winds, bound to L'Etang Harbor, may follow the directions before given

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for Bliss Harbor until past Man-of-War Rock (which bears NE. by N. from the Lighthouse on Bliss Island, distance ½ mile, and is bare at Half-Tide); then steer about NE. by E. ¾ E., leaving Flea and McCann's Islands, which are both bold, on the Port hand. When L'Etang Lighthouse bears S.SE., steer N.NW., and follow the directions before given for this harbor.

From the Eastward, leave the Lighthouse at Point Lepreau about 1½ miles to the Northward, and when it bears N. by E., steer about W. by N. ¼ N., leaving the Lighthouse at Beaver Harbor on the Starboard, and the East Wolf Island well on the Port hand. When you make the Lighthouse on the East side of entrance to L'Etang, which is about 2 miles to the Eastward of the Lighthouse at Bliss Harbor, continue the course until L'Etang Light bears NW. by N.; then run for it. Give this Light a berth of about ¼ mile, leaving it on the Starboard hand, and steer in about N.NW., leaving several Rocks, some of which are only bare at Half-Tide, on the Port hand, and the Roaring Bull, which lies about 300 yards Northwest from the Lighthouse (and is awash at High Water), on the Starboard hand. After passing this last danger, haul more Northerly until the Lighthouse bears S.SE.; then steer N.NW., and follow the directions before given.

High Water.

It is High Water in L'Etang Harbor on the days of the Full and Change of the Moon at 11h. 16m., or about 13 minutes before it is at Boston. Common Tides rise about 23 feet.

Wolf Island Lighthouse.

Upon the Southeast point of Southwest Wolf Island is a Lighthouse which shows a White Light which revolves every 1½ minutes; this Lighthouse is square, and is painted White.

Bearings and Distances from Light on Southwest Wolf Island.

	Distance.
West Quoddy Head, . . . W. by S. ¾ S.,	12 miles.
Fog Whistle on Northeastern part of Grand Menan, . . . SW. by S.,	9 "
East Quoddy Head Lighthouse, NW. by W. ¾ W.,	7½ "
Point Lepreau Lighthouse, . E. by N. ¼ N.,	14 "

Dangers.

The Southern part of this Island is bold, and may be approached as near as $\frac{1}{2}$ mile without danger.

Point Lepreau Lighthouse.

Upon Point Lepreau are two Fixed Lights, one above the other. The Lighthouse is painted in Red and White Horizontal stripes.

Bearings and Distances from Point Lepreau Lights.

	Distance.
Steam Whistle on Northern part of Grand Menan Island, . . SW. by W. $\frac{1}{4}$ W.,	21 $\frac{1}{4}$ miles.
Lighthouse on South Wolf Island, W. by S. $\frac{1}{4}$ S.,	14 "
Revolving Red and White Light at Cape Spencer, E.,	25 "
Lighthouse at Point Prim, Digby Gut, SE. by S.,	36 "
Isle Haut Lighthouse, . . . E. $\frac{3}{4}$ S.,	64 "

Steam Whistle.

A Steam Whistle is placed near this Lighthouse, which is sounded twice a minute in thick weather.

Dangers.

Point Lepreau is very bold off its Southern part; the only danger near it is a Ledge, which has 12 feet water upon it at Low Tide. This danger bears from the Lighthouse NW. by W. $\frac{1}{2}$ W.; distance about $\frac{1}{2}$ mile.

Beaver Harbor.

The entrance to this Harbor bears from the Lighthouse at East Quoddy Head about E.NE., distance $9\frac{1}{2}$ miles, and W. by N. $\frac{1}{2}$ N., 11 miles from Point Lepreau Lights.

Beaver Harbor Lighthouse.

On Drew's Head, West side of entrance to Beaver Harbor, is a Lighthouse which shows a fixed White Light.

Sailing Directions for Beaver Harbor in Daytime, with favorable winds and fair weather.

From the Westward, follow the directions before given for East-port Harbor by way of Ship Channel, until you make the Lighthouse at East Quoddy Head. Leave this Lighthouse about 2 miles on the Port, and make good the course NE. by E. $\frac{1}{2}$ E., leaving the Island called the White Horse, and also Bliss and L'Etang Harbor Lights, on the Port, and the Wolf Islands well on the Starboard hand. When the Lighthouse at Beaver Harbor is made, bring it to bear N. by W. $\frac{1}{2}$ W., and run for it on this course until you judge you are about $\frac{1}{3}$ mile from it; then steer more Northerly, leaving the Lighthouse a short distance to the Westward, and anchor on the Western side, close in to the village, in about 2 fathoms water at Low Tide.

From the Eastward, give Point Lepreau Lighthouse a berth of about $\frac{3}{4}$ mile, leaving it to the Northward, and steer W. by N. $\frac{1}{2}$ N., leaving the Eastern Wolf Island well on the Port hand. When Beaver Harbor Lighthouse bears N. NW., follow the directions before given.

This harbor is exposed to Southerly winds, but vessels will find shelter on the Western side, close to the village. A sunken Rock lies about S. by E. from the Lighthouse; distance about 300 yards. There is also a shoal spot of 13 feet about $\frac{1}{3}$ mile Northeasterly from this Lighthouse.

High Water.

It is High Water at Beaver Harbor about 10 minutes before it is at Boston. Common Tides rise about 22 feet.

Musquash Harbor.

The entrance to this Harbor bears from Point Lepreau Lighthouse E. by N., distance $10\frac{1}{2}$ miles, and W. $\frac{1}{4}$ N. from Cape Spencer Lighthouse, distance $14\frac{1}{4}$ miles.

Musquash Harbor Lighthouse.

Upon the Eastern point of entrance to this Harbor is a Lighthouse which shows a Green Fixed Light.

Remarks.

The entrance to this Harbor is about $\frac{1}{2}$ mile wide, and there is good anchorage a little way in, with $3\frac{1}{2}$ fathoms at Low Tide; but farther in a Bar extends across the harbor, upon which there is but little water at Low Tide. Vessels can cross this Bar at High Water, and run into the River, where there is a narrow Channel having from 2 to 3 fathoms water in it at Low Tide.

Sailing Directions for Musquash Harbor in Day-time, with favorable winds and fair weather.

From the Westward, give Point Lepreau Lighthouse a berth of about $\frac{3}{4}$ mile, leaving it to the Northward. When it bears North, make good the course **E. $\frac{1}{2}$ N.** 10 miles, or until Musquash Harbor Lighthouse bears **NE.** by **N.**; then run for it on this course. When the Harbor is fairly open, run in about **N.** by **E.**, keeping nearest the Lighthouse, which is left on the Starboard, and anchor in about $3\frac{1}{2}$ fathoms water at Low Tide. The Lighthouse bears from this anchorage (which is exposed to Southerly winds) **S.SE.** about $\frac{1}{2}$ mile. Farther in the water is shoal at Low Tide.

From the Eastward, give Cape Spencer a berth of about 1 mile, leaving it to the Northward. When the Lighthouse bears North, make good the course **W. $\frac{1}{4}$ N.** $14\frac{1}{2}$ miles, or until the Lighthouse on the East side of Musquash Harbor bears **N.** by **W.**; then run in, and anchor as before directed.

High Water.

It is High Water at Musquash Harbor about the same time as at Boston. Common Tides rise about 24 feet.

Harbor of St. John.

The entrance to this Harbor, by Ship Channel, is Northeasterly about 47 miles from the Lighthouse at West Quoddy Head,

and about 21 miles in the same direction from Point Lepreau Lights.

Partridge Island Lighthouse.

Upon Partridge Island, entrance to this Harbor, is a Lighthouse which is painted in Red and White Vertical stripes, and shows a fixed White Light.

Bearings and Distances from Lighthouse upon Partridge Island.

	Distance.
Bryer's Island Lighthouse, . . . SW. by S., . . .	61 miles.
Boar's Head (entrance to Petit	
Pass), SW. by S. $\frac{1}{2}$ S.,	51 "
Prim Point (entrance to Digby	
Gut), S.	35 $\frac{1}{2}$ "

Steam Whistle.

A Steam Whistle is placed near this Lighthouse which sounds in thick weather 10 seconds every minute.

Breakwater Light.

At this date a ~~fixed~~ *White* Light is placed on the outer end of the Breakwater off Negro Point. This Light, which bears from Partridge Island Lighthouse N. by W., distance $\frac{1}{4}$ mile, is said to be uncertain.

St. John Harbor Light.

To the Northward of Partridge Island, on a Spit or Bar, which extends off nearly $\frac{1}{2}$ mile from the Western shore, is erected a Lighthouse which is painted in Red and White Vertical stripes, and shows a fixed ~~White~~ *White* Light. This Lighthouse bears from Partridge Island Light N. by E. $\frac{1}{4}$ E.; distance nearly 1 mile.

Remarks.

There are two entrances to this Harbor. The Ship Channel, which has a depth of about 16 feet at very Low Tides, leads into the Eastward of Partridge Island; but 12 feet of water, however, at Low Tide, can be carried through it on a direct course for the Harbor Light. The other passage, which is to the Westward of Partridge Island, has about 8 feet water in it at Low Tide.

Sailing Directions for the Harbor of St. John in Daytime, with favorable winds and fair weather.

From the Westward, when past Mount Desert Rock, which may be left about a mile on either hand, bring the Lighthouse to bear **SW.** by **W.** $\frac{3}{4}$ **W.**, and steer **NE.** by **E.** $\frac{3}{4}$ **E.** for Point Lepreau Lighthouse; distance 98 miles. If this course is made good, the large Buoy off Southeast Rock, painted in Red and Black Horizontal stripes, and which bears **S.** by **E.** 4 miles from Petit Menan Lighthouse, will be left 6 miles on the Port hand; the Whistling Buoy, which lies **S.** by **W.** 2 miles from Moose-A-Bec Lighthouse, 3 miles on the Port; Libby Island Lighthouse, $4\frac{1}{2}$ miles on the Port; Little River Lighthouse, $2\frac{3}{4}$ miles on the Port; West Quoddy Head Lighthouse, $3\frac{1}{4}$ miles on the Port; and the Lighthouse on the South Wolf Island, $2\frac{3}{4}$ miles on the Port hand. Machias Seal Island Lighthouse will be left about $6\frac{3}{4}$ miles on the Starboard hand; Northern part of Grand Menan Island, which is bold and free from dangers, about $2\frac{1}{4}$ miles on the Starboard hand. When Point Lepreau Lights are made, bring them to bear **NE.** by **E.** $\frac{3}{4}$ **E.**, and run for it on this course. Give this Lighthouse a berth of about 1 mile, leaving it on the Port, and when it bears North, make good the course about **E.** $\frac{1}{2}$ **N.** along the shore, keeping not less than $\frac{3}{4}$ mile from it. When Partridge Island Lighthouse bears **NE.** by **N.**, then run for it on this course. If intending to enter the Harbor by the Ship Channel, give Partridge Island a berth of $\frac{1}{2}$ mile, leaving it to the Westward; and in order to avoid the Reefs which lie to the Northeast of this Island, keep a sharp lookout for the Bell Boat, which bears from Partridge Island Lighthouse **E.** $\frac{1}{2}$ **S.**; distance about $\frac{1}{3}$ mile. When this Bell Boat is made, leave it close to on the Port, and steer **N.** by **W.** As you sail in, you will see a Red Buoy, which is left close to on the Starboard hand, and when past it, steer North for the Harbor Lighthouse, which may be left about 100 yards on the Port hand. When past the Lighthouse, make good the course **N.** $\frac{1}{2}$ **W.** up the harbor. In order to avoid the deep water and strong current, anchor close in near the Northern part of the city, or a little below the Southern Wharves on the West side of the river, in from 3 to 5 fathoms at Low Tide. About 12 feet water may be taken in on the above courses at Low Tide.

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Island, follow the directions before given until the Lighthouse on this last-named Island bears NE. by N.; then run for it on this course until you make the outer end of the Breakwater off Negro Point; then haul to the Westward until the end of the Breakwater bears NE. $\frac{1}{2}$ N.; then run for it, and leave it close to on the Port. When past it, steer NE. $\frac{1}{4}$ N. for a Red Buoy; leave this Buoy close to on the Starboard and run for the Harbor Light, bearing North, and follow the directions before given. About 8 feet water can be carried through this passage at Low Tide.

From the Eastward, after passing Cape Spencer Lighthouse, bring the Lighthouse on Partridge Island to bear N. by W. $\frac{1}{2}$ W., and run for it until about $\frac{1}{2}$ mile from it; then steer about N. by E., keeping a sharp lookout for the Bell Boat, which lies to the Eastward of Partridge Island Reef. When this is made, leave it close to on the Port, and follow the directions before given.

Sailing Directions for the Harbor of St. John, at Night-time, with favorable winds and fair weather.

If a vessel at Night, with favorable winds, take her departure from Mount Desert Rock Light, bound to St. John, her best course is NE. by E. $\frac{3}{4}$ E. for Point Lepreau; distance 98 miles. If this course is made good, the Fixed Light, varied by White Flashes, upon Petit Menan Island, will be left 10 miles to the Northward; 15 miles farther, the Flashing Light upon Mistake Island, 5 miles to the Northward; the Fixed White Light on Libby Island, $4\frac{1}{2}$ miles to the Northward; the Fixed Light varied by White Flashes, at Little River, $2\frac{3}{4}$ miles to the Northward; the Fixed White Light at West Quoddy Head, $3\frac{1}{4}$ miles to the Northward; the Revolving Light upon the South Wolf Island, $2\frac{3}{4}$ miles to the Northward. After passing this last-named Light, you will make the two Fixed Lights, one above the other, upon Point Lepreau. On this course, NE. by E. $\frac{3}{4}$ E., from Mount Desert Rock Light, the Machias Seal Island Lights will be left $6\frac{3}{4}$ miles on the Starboard hand; the Northern part of Grand Menan Island, which is bold and free from dangers, $2\frac{1}{4}$ miles on the Starboard hand.

In running up the Bay of Fundy, from Mount Desert Rock Light to Point Lepreau, if you judge your vessel is off the line of the above course, you can haul more Northerly or Southerly as circumstances require.

From Point Lepreau Lights to St. John Harbor.

At Night, when the two Fixed Lights, one above the other, are made, upon Point Lepreau, give them a berth of about $1\frac{1}{2}$ miles, leaving them on the Port hand; and as soon as they bear North make good the course **E. $\frac{1}{2}$ N.** for the Revolving Red and White Light at Cape Spencer, distance 26 miles. On this course, the Green Fixed Light at Musquash Harbor will be left about $2\frac{1}{2}$ miles on the Port hand. When Cape Spencer Light is made, bring it to bear **E. $\frac{1}{2}$ N.**, and run for it on this course until the Fixed White Light on Partridge Island, entrance to the harbor of St. John, bears **N.NE.**; then steer **NE. by N.** As you sail in, you will see, a short distance to the Northward of the Light on Partridge Island, the Red Fixed Light upon the outer end of the Breakwater, and also the Harbor Light, which is a fixed White Light. Continue the course **NE. by N.** until this last-named Light bears **N. $\frac{3}{4}$ W.**; then run for it on this course, leaving Partridge Island Light about $\frac{1}{2}$ mile on the Port. Give the Harbor Light a berth of about 100 yards, leaving it on the Port hand. and make good the course **N. $\frac{1}{2}$ W.** up the harbor, and anchor off the city.

In entering this Harbor at Night, after passing Partridge Island Light, a careful attention to the current is necessary. It is also a good plan to have plenty of chain overhauled, as the water in the harbor is very deep in some places.

Vessels of more than 12 feet draught, bound into the harbor of St. John, should not attempt to cross the Bar until at least $\frac{1}{4}$ Flood.

Thick Weather.

In sailing from Mount Desert Rock up the Bay of Fundy, in thick weather, captains will bear in mind that at this time (1880) there is placed at Petit Menan Lighthouse a Fog Whistle; about 2 miles **S. by W.** from Moose-A-Bec Lighthouse, a Whistling Buoy; at Machias Seal Island Lighthouses, a Fog Whistle; at West Quoddy Head, a Fog Whistle; at Bishop's Head, Northern part of Grand Menan, a Fog Whistle; at Point Lepreau, a Fog Whistle; and at Partridge Island, entrance to the Harbor of St. John, a Fog Whistle. All these, in thick weather, should be heard from 5 to 10 miles; therefore, in navigating this part of the coast, the ear, assisted by the compass and lead, will be pilot.

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High Water.

It is High Water in the Harbor of St. John on the days of the Full and Change of the Moon at 11h. 21m.; or about 8 minutes before it is at Boston. Common Tides rise about 25 feet.

Grand Menan.

This Island, which is about 12 miles in length, has a width of from $1\frac{1}{4}$ to 6 miles. On its Western side the cliffs are nearly perpendicular, and from 150 to 400 feet above the level of the sea.

Dangers.

Off the Western part of Grand Menan, from its Northeast to Southwest Heads, there are no dangers excepting a few Rocks which lie near the Southwest Head, close in with the shore; but there are many Rocks, Shoals, and Ledges which lie off to the Southwest, Southwest, Southeast, and Eastward of this Island. The current of Ebb and Flood sets very strong across these Ledges, making the navigation, especially in thick weather, extremely dangerous in this vicinity. A better knowledge of these dangers can be obtained by closely inspecting the charts than by any written description.

Seal Cove, or Wood Island Harbor.

This Harbor, which has a depth of from 5 to 7 fathoms water in it at Low Tide, lies near the Southern part of Grand Menan, and is easy of access.

Gull Head Lighthouse.

Upon Gull Head (Southwest part of Grand Menan), West side of entrance to Seal Cove, is a Lighthouse which shows a flashing Red and White Light.

Bearings and Distances from Gull Head Lighthouse.

		Distance.
West Quoddy Head Lighthouse, .	N. $\frac{3}{4}$ E., .	13 miles.
Little River Lighthouse,	NW. by W., .	18 "
Machias Seal Island Lighthouses, .	W. by S. $\frac{1}{2}$ S.,	10 $\frac{1}{2}$ "
Gannet Rock Lighthouse,	SE. by S. $\frac{1}{2}$ S.,	7 $\frac{1}{2}$ "

Sailing Directions for Seal Cove in Daytime, with favorable winds and fair weather.

From the Westward, as soon as the Lighthouse on Gull Head is made, bring it to bear **E.** by **S.**, and run for it on this course; haul round this Lighthouse at a distance of about $\frac{1}{2}$ mile, leaving it on the Port hand. When the harbor is fairly open, bearing about **NE.**, run in, and in order to avoid Buck's Ledge, which lies off about $\frac{1}{3}$ mile from the Western side, a little above the entrance, and is left on the Port hand, keep nearly midway the entrance, and anchor near the Western shore, at the head of the harbor, in about 5 fathoms water at Low Tide, and 8 at High Tide.

From the Eastward, as soon as the Gannet Rock Lighthouse is made, bring it to bear **W.** $\frac{1}{2}$ **N.**, and run for it on this course, leaving the Spindle on the Old Proprietor about $1\frac{1}{2}$ miles on the Starboard hand; give the last-named Lighthouse a berth of about $\frac{1}{2}$ mile, leaving it on the Port hand. When it bears **SE.** by **S.** $\frac{1}{2}$ **S.**, keep it on this bearing, and steer **NW.** by **N.** $\frac{1}{2}$ **N.** for Gull Head Lighthouse, and follow the directions before given.

In beating into this harbor, after passing Buck's Rock (before described), there are no dangers near the Western shore, and it may be approached at a distance of $\frac{1}{2}$ mile without danger.

High Water.

It is High Water at Seal Cove (or Wood Island Harbor) on the days of the Full and Change of the Moon at 10h. 54m., or about 35 minutes before it is at Boston. Common Tides rise about 18 feet.

Lighthouse.

	Distance.
..	13 miles.
..	13 "
S.,	10½ "
½ S.,	7½ "

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Grand Harbor.

The entrance to this Harbor, which is on the Southeastern part of Grand Menan Island, is about 7 miles East Northerly from Gull Head Lighthouse, and about NE. by N. ¾ N. 8 miles from Gannet Rock Lighthouse.

Remarks.

About 9 feet water can be carried into this harbor at Low Tide, and there is a narrow Channel of about 12 feet water a short distance above the Lighthouse. Above this the water is shoal, but vessels may lie aground on mud secure from all winds.

Grand Harbor Lighthouse.

Upon Ross Island, East side of entrance to Grand Harbor, is a Lighthouse which shows a fixed White Light. This Lighthouse bears from Gannet Rock Lighthouse NE. by N. ¾ N.; distance 9½ miles.

**Sailing Directions for Grand Harbor in Daytime,
with favorable winds and fair weather.**

From the Westward, as soon as Gull Head Lighthouse is made, bring it to bear E. by S., and run for it on this course. Give this Lighthouse a berth of about ½ mile, leaving it on the Port hand, and make good the course E. by S. ½ S. As you sail in, you will see on the Port hand the Wood Islands, the largest of which is quite high, and nearly ahead will also be seen the Three Islands. The best Channel into Grand Harbor, which is about 1¼ miles wide, is between the Wood Islands and Three Islands. When this passage is fairly open, run in, with the Lighthouse bearing about NE., keeping about midway the passage, leaving Green Island, which is small, on the Starboard hand. When well past this last-named Island, haul more Easterly until the Lighthouse bears NE. by N.; then, with the harbor fairly open, run in, keeping nearest the Lighthouse, and anchor about ½ mile above it in about 2 fathoms water at Low Tide, and 5 at High Tide. Above this the water is shoal. A short distance below the Lighthouse, in nearly mid-channel, there is said to be a Rock. Strangers entering this harbor at Low Tide should therefore shorten sail, and proceed with caution.

From the Eastward, as soon as the Gannet Rock Lighthouse is

made, bring it to bear **W. $\frac{1}{2}$ N.**, and run for it on this course, leaving the Spindle on the Old Proprietor about $1\frac{1}{2}$ miles on the Starboard hand; give the last-named Lighthouse a berth of about $\frac{1}{2}$ mile, leaving it on the Port hand. When it bears South, keep it on this bearing, and steer North until the passage between the Wood Islands and Three Islands is fairly open; then run in as before directed.

In beating in, keep about midway between the Wood Islands and Three Islands, as there are Ledges which extend off some distance from them.

Vessels of more than 9 feet draught bound into Grand Harbor should anchor near its mouth in from 5 to 8 fathoms water at Low Tide, and wait until at least $\frac{1}{4}$ Flood before attempting to enter it.

High Water.

It is High Water in Grand Harbor on the days of the Full and Change of the Moon at 11h. 9m., or about 20 minutes before it is in Boston. Common Tides rise about 19 feet.

Flag Cove.

This deep Cove, which is easy of access, is situated upon the Northern side of Long Island Bay, which is on the Eastern side of Grand Menan Island, about $2\frac{1}{2}$ miles from its Northeast Head.

Swallow Tail Lighthouse.

Upon Swallow Tail, north side of entrance to Flag Cove, is a Lighthouse which shows a fixed White Light.

Bearings and Distances from Swallow Tail Lighthouse.

		Distance.
East Quoddy Head Lighthouse, . . .	N. by W. , . . .	13 miles.
South Wolf Lighthouse,	N. by E. $\frac{1}{2}$ E. , . . .	$10\frac{1}{2}$ "
Point Lepreau Lighthouse,	NE. $\frac{1}{2}$ E. , . . .	21 "
Cape Spencer Lighthouse,	E. by N. $\frac{3}{4}$ N. , . . .	44 "
Point Prim Lighthouse, entrance to Digby Gut,	E. SE. ,	41 "

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Flag Cove, is a

Lighthouse.

Distance.

. 13 miles.
 E., $10\frac{1}{2}$ "
 . 21 "
 N., 44 "
 . 41 "

Sailing Directions for Flag Cove in Daytime, with favorable winds and fair weather.

From the Westward, follow the directions before given for Eastport Harbor (by Ship Channel) until Bishop Head, the Northeast part of Grand Menan, bears **E. by S.**; then run for it on this course. Leave this ~~last-named~~ Head about $\frac{3}{4}$ mile on the Starboard hand, and steer about **S.SE.**, and haul round the Lighthouse on the Swallow Tail at a distance of about $\frac{1}{2}$ mile, leaving Flag Point, which is the first point to the Westward of the Lighthouse, about $\frac{1}{2}$ mile on the Starboard hand. After passing this last-named point, haul in to the Northwestward, and as soon as you strike 4 fathoms water at Low Tide, which will be 7 at High Tide, anchor with the outer part of Flag Point bearing about **E.NE.**

From the Eastward, run for the Lighthouse on Swallow Tail on any bearing from **SW.** to **NW.**, and follow the directions before given.

In beating into this Cove the only danger to be avoided is a Ledge of Rocks which lies off about $\frac{1}{2}$ mile Southeast from Flag's Point, and is bare at $\frac{3}{4}$ Ebb.

This Cove is somewhat exposed to Southeasterly winds, but the holding-ground is excellent.

Whale Cove.

This deep Cove, which is exposed to Northeasterly winds, is about $1\frac{1}{2}$ miles Southeasterly from the Northeast Head of Grand Menan. Vessels beating down the Bay may anchor here, and wait for the turning of the Tide. The best anchorage is in from 10 to 15 fathoms water, about $\frac{1}{3}$ mile from shore. Vessels entering this Cove should *always sound before letting the anchor go.*

Steam Whistle.

On Bishop Head, Northeastern part of Grand Menan, is a Steam Whistle, which sounds in thick weather. West Quoddy Head Lighthouse bears from this Steam Whistle **NW.** by **W.** $\frac{3}{4}$ **W.**, distance $7\frac{1}{2}$ miles; East Quoddy Head Lighthouse, **N.** by **W.**, distance $10\frac{3}{4}$ miles; Lighthouse on South Wolf Island, **NE.** by

N. $\frac{1}{4}$ N., distance 9 miles; Point Lepreau Lights, NE. by E. $\frac{1}{4}$ E., distance $20\frac{3}{4}$ miles.

Anchorage.

There are several more good places of anchorage upon both the Eastern and Southeastern part of Grand Menan Island, but in no case should vessels attempt to enter them without a pilot.

Currents.

The currents around Grand Menan Island, especially near its Southern, Southeastern, and Eastern parts, run very strong. Vessels should not, therefore, attempt to navigate in this vicinity without a commanding breeze.

Horse Island Harbor.

This small harbor, in which there is excellent anchorage in all winds, in from 2 to 6 fathoms water at Low Tide, is North about $4\frac{1}{2}$ miles from Cape Small Point, and East Northerly about 10 miles from the Lighthouse upon Halfway Rock.

Sailing Directions for Horse Island Harbor in Day-time, with favorable winds and fair weather.

From the Westward, pass a short distance to the Southward of the Lighthouse upon Halfway Rock, and bring it to bear W. $\frac{1}{2}$ S., on which bearing keep it, and steer E. $\frac{1}{2}$ N. for Bald Head, which is distant about $8\frac{1}{2}$ miles from this Lighthouse, and is the first Head to the Northwestward of Cape Small Point. As you approach Bald Head, you will see the Buoy painted in Red and Black Horizontal stripes, off the Southwest part of Lumbo's Ledge, which has about 9 feet water upon it at Low Tide. Leave this Buoy at least $\frac{1}{4}$ mile on the Starboard hand, and after passing it continue the course E. $\frac{1}{2}$ N. for Bald Head until about $\frac{3}{4}$ mile from it; then steer about N. $\frac{1}{2}$ E., leaving the low, bare, rocky Islet called the Brown Cow, and Mark Island (which is wooded), and also Wyman's Ledge,* which has but 3 feet water upon it, all

* This dangerous Ledge, which has but 3 feet water upon it at low tide, lies about $\frac{1}{2}$ mile E. by S. from the Southern end of Mark Island, and about $1\frac{1}{4}$ miles NW. $\frac{1}{4}$ W. from Bald Head. At this date, 1880, it is not buoyed.

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on the Port hand; the Red Buoy off Gooseberry Ledge, and also Wood Island, which lies about 1 mile North from the last-mentioned Buoy, on the Starboard hand. After passing Wood Island, keep a sharp lookout for the Black Spindle on the Southern part of Jamison's Ledge. When this Spindle is made, leave it 250 yards on the Port and steer about NE. by N. $\frac{1}{2}$ N. As you sail in, you will see on the Starboard a bare rocky Islet, called North Blacksnake, which may be left a short distance on the Starboard hand. When about 250 yards past this last Islet, haul more Easterly, and when the harbor is fairly open, bearing about N.NE., run in mid-way and anchor in about 3 $\frac{1}{4}$ fathoms at Low Tide, which will be 5 at High Tide.

From the Eastward, haul round Cape Small Point at a distance of about 1 mile, leaving all the Ledges off this point well on the Starboard hand. When Bald Head, which lies Northwest about $\frac{3}{4}$ mile from Cape Small Point, bears E. $\frac{1}{2}$ N., distance $\frac{3}{4}$ mile, follow the directions before given.

High Water.

It is High Water in Horse Island Harbor about 21 minutes before it is at Boston. Common Tides rise about 9 feet.

Cundiz Harbor.

This small harbor, in which there is good anchorage in from 3 $\frac{1}{4}$ to 4 $\frac{1}{2}$ fathoms water at Low Tide, lies on the Northwestern side of New Meadows River, about 2 miles to the Northward of entrance to Horse Island Harbor.

Sailing Directions for Cundiz Harbor in Daytime, with favorable winds and fair weather.

From the Eastward or Westward, follow the directions before given for Horse Island Harbor until you make the Black Spindle off the Southern part of Jamison's Ledge. Leave this Spindle about 300 yards on the Port, and make good the course about N. $\frac{1}{2}$ W., leaving North Blacksnake on the Starboard, and the Red Spindle on Goudy Ledge on the Port. After passing this last-

mentioned Spindle, New Meadows River will be fairly open, bearing about **N. by E. $\frac{1}{2}$ E.**; then run up, keeping midway the entrance. As you sail in, you will see, on the Western side of the River, about $1\frac{3}{4}$ miles from the last-mentioned Spindle, a group of bare Rocks, lying **N.NE.** and **S.SW.** These are Cedar Ledges, which form the Eastern side of Cundiz Harbor. Continue the course of the River until this harbor is fairly open; then run in about midway, leaving the last-mentioned Rocks on the Starboard, and anchor in from $3\frac{1}{4}$ to $4\frac{1}{2}$ fathoms water at Low Tide.

Weymouth Back River.

The entrance to this River, which is between Grape Island on the North, and Long Neck on the South, bears **S.SE.** from Pig Rock Beacon; distance 1 mile. At High Tide, about 17 feet water can be carried to the Bradley Fertilizer Company's Works, which is about $\frac{3}{4}$ mile from its entrance, and about 15 feet to the Coal Wharf, which is $\frac{1}{2}$ mile above these works.

Sailing Directions for Weymouth Back River in Daytime, with favorable winds and fair weather.

By the following directions, at High Water, vessels of not more than 10 feet draught, with winds from **N.NW.** to **NE.**, may safely enter this River.

From the Southward or Eastward, follow the directions before given for Boston Harbor until Boston Lighthouse bears **NE.** by **E. $\frac{3}{4}$ E.**; then make good the course **SW.** by **W. $\frac{3}{4}$ W.** When the passage called Nantasket Gut* is fairly open, then run in, keeping nearest Windmill Point, which is on the Eastern side of this Gut; bring this last-mentioned Point to bear **NE.** by **N. $\frac{1}{2}$ N.**, and make good the course **SW.** by **S. $\frac{1}{2}$ S.** As you sail in, you will see to the Southwestward Pig Rock Beacon; continue the course **SW.** by **S. $\frac{1}{2}$ S.** until this Beacon bears **SW.** by **W.**;

* The passage between Peddock's Island on the West and Windmill Point on the East is called Nantasket Gut. The centre of this Gut bears South from George's Island; distance about 1 mile.

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then run for it on this course, passing between two small Islands called Prince Head and Sheep Island; the latter, which is low, is left on the Port hand. When about $\frac{1}{2}$ mile from Pig Rock Beacon there will be seen, about $\frac{3}{4}$ mile to the Southward of Sheep Island, another Island, which is quite high; this is called Grape Island. When the Western part of this last-named Island bears S. $\frac{1}{2}$ E., run for it on this course until the Western part of Sheep Island bears NE. by N.; then steer SW. by S. until Pig Rock Beacon bears N. by W. If it is Low Tide, then anchor in from 3 to 4 fathoms water, with the first Buoy (Black), at the entrance of the River, bearing SE.; distance about $\frac{1}{3}$ mile. At $\frac{3}{4}$ Flood, in order to avoid the Shoal Water and Rocks which extend off from the Northwest part of Grape Island, steer from this anchorage S. SE. until the first Buoy (Black) at the entrance bears about East; then run for it, leaving it close to on the Port, and haul round the next Buoy (Red) close to, leaving it on the Starboard, and steer to the Southward, leaving one Black Buoy on the Port, and two Red Buoys on the Starboard hand; haul round the last Buoy off the Point, and if bound to the Bradley Fertilizer Company's Works, keep the outer end of the wharf a little on the Starboard bow; but if bound up to the Coal Wharf, after passing the above works keep about in the middle of the River. Strangers should not attempt to beat into Weymouth Back River.

It is advisable for vessels of more than 10 feet draught bound to this river, to anchor in Nantasket Roads and employ a Tug Boat. The distance from the above Roads to the entrance of Weymouth Back River is 3 miles.

High Water.

It is High Water in Weymouth Back River about the same time that it is at Boston. Common Tides rise about $9\frac{1}{2}$ feet.